Medical Hints

for

Hot Climates

Charles Heaton

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MEDICAL HINTS

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FOR

HOT CLIMATES

AND

FOR THOSE OUT OF REACH OF PROFESSIONAL AID.

BY

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PREFACE.

THE need has been expressed for a portable volume of Medical reference for travellers and others out of reach of medical aid in the Tropics and Colonies. There are many good works on domestic medicine, but they are, as a rule, too bulky for easy carriage, or too scanty in their information for practical use. The present small work aims at portability, and also endeavours to insist upon the importance of antiseptic treatment of wounds in all cases, even in the absence of the surgeon, and the vital importance of the prevention of such diseases as typhoid, cholera, filaria, etc., by the efficient filtration and sterilization of water. The fewer drugs compatible with efficiency the better, and of these, those in tabloid form are to be preferred, both on the score of compactness, easy measurement, and durability.

Chronic complaints are slightly touched upon, for no one with a serious chronic ailment ought to travel away from skilled aid.

I trust that my many old friends and former patients will find this small work useful.

C. H.

London, 1897.

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INTRODUCTION.

MEDICINE CHESTS—LIST OF DRUGS AND APPLIANCES—DOSES AND MEASURES.

If, as is strongly recommended, the drugs are carried for the most part in solid tabloid form (Burroughs, Wellcome & Co.), scales are not needed, but the tabloids should be crushed in a spoon with water before being taken, if it is desired that they should act more readily.

A small graduated medicine-glass, marked up to 60 drops, should always be carried. The medicine chest should contain—Tape, plaster, light bandages, absorbent cotton wool, lint, an enema syringe, a glass syringe, blunt-pointed surgical scissors, surgical needles, and ligature silk, and a packet of "Lister's cyanide-gauze" for dangerous wounds will be found very useful, two clinical thermometers, catheter No. 7 soft rubber, and a box of safety pins. A bottle of crystallized pure carbolic acid should always be handy, not only for wounds, but for daily comfort in many ways.

For description and use of the more common remedies and appliances, see chapter vi.

Doses.—$\frac{2}{3}$ of the adult dose at 18 years old.

$\frac{1}{2}$	„	„ from 10 to 15.
$\frac{1}{4}$	„	„ „ 5 „ 10.
$\frac{1}{8}$	„	„ at 2 years.
$\frac{1}{10}$	„	„ „ 1 year.
$\frac{1}{20}$	„	„ „ 6 months.

Measurements.—Liquids are measured, solids are weighed.

Of liquid.	Of solids..	
20 drops or minims	or grains	= one scruple ℈j
60 „	„	or 3 scruples = one drachm ʒj
8 drachms *	drachms	= one ounce ℥j
20 ounces		= one pint of liquid
8 pints		= one gallon

Rough Measurement—

One tea-spoonful = a little more than one drachm.
„ dessert spoonful = „ „ two drachms.
„ table-spoonful = „ „ four drachms, or "half an ounce"
„ wine glassful (port) = about two ounces.

Medicines.—Recommended in tabloid form (Burroughs, Wellcome & Co.)—

Ammon. carbonate (sal volatile)	3 gr. in tabloid.
Ammonium chloride (sal ammoniac)	5 „ „
Antimony, Tartarated	$\frac{1}{60}$ „ „
Antipyrin	5 „ „
Arsenious acid	$\frac{1}{100}$ „ „
Calomel	1 „ „
Cascara compound tabloids	

* "Drachm" is often written "dram" for brevity.

Cascara sagrada, extract	2 gr. in tabloid.
Chloral	10 „ „
Cocaine	½ „ „
Colocynth hyoscyamus and hydrarg.	5 „ „
Dover's Powder	5 „ „
Ginger, strong tincture	5 „ „
Hydrarg. perchloride (sublimate)	Soloids.
Ipecac powder (similar to ipecacuanha wine) ...	1/10 „ „
Ipecac powder	5 „ „
Iron (Blaud's Formula)	5 „ „
Nux vomica	3 drops „
Potassium bromide	10 gr. „
„ nitrate	5 „ „
„ permanganate	2 „ „
Paregoric	5 drops „
Quinine	3 gr. and 5 gr. tabloid.
Rhubarb and soda	5 gr. in tabloid.
Salicylate of soda	5 „ „
Santonine	½ „ „
Soda bicarbonate	5 „ „
Soda mint tabloid	
Sulphate of soda	30 „ „
Sulphonal	5 „ „
Warburg's Tincture	30 drops in each.

Recommended in other form*—

Alum.	Boric acid powder.
Bœl.	Camphor.
Borax.	Carbolic acid.

* The following can generally be obtained in the Indian bazaars: —Alum, Hind. *Phutkari.* Bœl (*Ægle Marmalos, Stone Apple*), Hind. *Beel geerie.* Castor oil, Hind. *Rindee Ka Tail, Apendi Ka Tel.* Camphor, Hind. *Kafoor.* Borax, Hind. *Sohaga.* Chiretta, Hind. *Kreat.* Sulphate of copper (*blue vitriol*), Hind. *Morchut.* Tutiya Pomegranate, Hind. *Anar.* Sal ammoniac, Hind. *Nawsagar.* Sulphur, Hind. *Gunduk.*

Castor oil.
Caustic (nitrate of silver).
Chiretta.
Chlorodyne.
Chloroform.
Epsom salts (sulphate of magnesia).
Glycerine.
Nitric acid.
Pomegranate.
Sal ammoniac.
Seidlitz powders.
Sulphate of copper.
Sulphur.
Sweet spirits of nitre.
Turpentine.

The smallest list of drugs for travelling, etc. :—

1. Quinine.
2. Pill colocynth and henbane and hydrarg. (tabloids), or any other laxative of personal choice.
3. Dover's Powder.
4. Cocaine.
5. Sublimate soloids or carbolic acid.
6. Soda bicarbonate.
7. Warburg's Tincture.
8. Paregoric.
9. Chlorodyne.
10. Bromide of potassium.
11. Ginger, essence of.
12. Ipecacuanha powder.
13. Carbonate of ammonia.
14. Iron (Blaud's pill).
15. Potash nitrate.
16. Boric acid.
17. Nux vomica.

All the above drugs and appliances may be obtained, packed, in the most convenient form, at any good chemist's. Perhaps the best forms are those of Burroughs, Wellcome & Co., and for personal use the "Metallic Indian," and "Sir William Moore's case," are recommended.

The above may be obtained from Messrs. B., W. & Co., Snow Hill Buildings, Holborn, London; and also at all European drug stores in large towns.

CHAPTER I.

HEALTH AND HOW TO PRESERVE IT.
WATER AND FILTRATION.

MEDICAL HINTS

FOR

HOT CLIMATES.

CHAPTER I.

GENERAL INSTRUCTIONS FOR THE PRESERVATION OF HEALTH.

The following rules are recommended for the preservation of health :—

DIET.

1. Be regular in the time of taking meals.

Too long intervals between meals operate injuriously by fatiguing the stomach, depriving it of its tone and impairing its digestive powers; and too short intervals are injurious, by overloading the organ and throwing too much work upon it.

Note.—A late breakfast (11.30 a.m.) is recommended as doing away with the necessity of any but a light luncheon (a biscuit, and a glass of dry sherry or cup of tea) and, as securing a long morning which may be devoted to the inspection of outdoor work, or to official correspondence, at

a time when both body and mind are in a state of the greatest vigour.

2. Do not eat too much at a time ; *i.e.* be content with a satiety, and leave off with an appetite.

A popular idea prevails amongst Europeans, that owing to the depressing influences which a tropical climate exerts on the economy, a large amount of food is required to supply the waste material which is constantly going on—a waste which they imagine to be even greater than occurs in temperate regions. That such an idea is an erroneous one there is not a shadow of a doubt, and so far from there being a necessity for an increase in the supply of food, just the reverse is the case, as in consequence of the elevated temperature, the waste or expenditure of tissue is actually less, and so also is the real demand for food. The natural tendency of an Indian climate is to produce decreased functional action of all the organs of the body, and especially those concerned in digestion, and under these circumstances, where a predisposition to decreased functional activity already exists, the consumption of larger quantities of food than are needed for the requirements of the system can only add fuel to the fire, and conduce directly to organic disease.

3. Take simple food, and avoid rich dishes.

A hot, stimulating diet causes thirst, which leads to the imbibing of large quantities of fluid—too frequently alcoholic—most destructive to healthy digestion.

4. Eschew heavy luncheons.

Heavy luncheons are wholly unnecessary (unless an early breakfast is taken), and positively hurtful, especially when much beer or wine is consumed at them, by inducing a drowsy or sleepy state and a disinclination to exertion of any kind, mental or bodily. Sleep, if indulged in after luncheon, is usually followed by a sick headache, unpleasant taste in the mouth and restless nights.

5. Guard against intemperance in the use of alcoholic drinks.

The abuse of spirituous and alcoholic liquors is the most fertile source of disease of the brain, liver, kidneys, stomach, and bowels. It also increases the liability to epidemic diseases, especially cholera, and to nervous diseases, acute and chronic, causing exhaustion and a whole train of nervous phenomena, and, in aggravated cases, *delirium tremens.*

6. Always masticate the food well, and in order that you may do so, pay particular attention to the teeth, and you will be amply repaid for your trouble.

Besides washing the teeth every morning, wash them also the last thing at night, with a soft brush and a little spirit and water. It is better and safer to use only water that has been boiled or filtered. Use the brush up and down (as in this way it gets between the interstices of the teeth), as well as from side to side. A good tooth-powder for use consists of 1 oz. prepared chalk and 10

grains bicarbonate of soda, rubbed up with a fragment of camphor to flavour. After washing the teeth, touch them back and front with a camel's-hair brush, soaked in spirits of wine, a small bottle of which should be kept on the dressing-table ready for use. The spirit hardens the enamel, and prevents and even arrests decay. When the teeth are neglected, the breath becomes offensive, mastication imperfect, toothache frequent, and the teeth loosen and fall out at a comparatively early age.

7. Ripe fruits in their season are always grateful and wholesome when taken in moderation, and cool the system.

Fruits are most enjoyable and easiest of digestion when taken early in the morning; but this applies mostly to heavy fruits such as apples; light fruits such as oranges can be taken at any time. The acid fruits, such as orange and lime, containing as they do a free vegetable acid, are very useful in warding off scurvy. For the gouty an orange or a lemon at night is advantageous.

8. Alcohol.

The habit so general throughout the tropics of taking "pegs" (soda-water and whisky) is most pernicious and enervating, and cannot too strongly be condemned. The exhilaration which ensues on their use is temporary only, and followed after a time by depression, which necessitates a resort to "another peg." It is quite astonishing how much

alcohol is consumed in this way in the course of a day, and the finest constitution in the world must eventually break down under such a practice. The tremulousness of the hands, the want of appetite, the restless sleep at night, and the shaky feeling so often complained of by those habituated to the indulgence of "pegs," are so many symptoms pointing to their baneful influence on the constitution.

9. Wines, beer.

Claret is by far the best wine for a hot climate. Having an agreeable sub-acid taste, it forms a grateful and cooling drink especially in the hot season, and rarely causes acidity of stomach. It is, besides, a blood-making wine, since it contains a small quantity of iron, which renders it peculiarly adapted for the tropics. Beer is a fine bitter tonic when taken in moderation, but is apt to cause indigestion, unless combined with plenty of outdoor exercise. Port is rarely needed except in cases of sickness; possessing astringent properties in a high degree, it is useful in supporting the strength in diarrhœa and dysentery. Sherry should be of the best quality and dry, and used in small quantities, as a condiment, to give a relish to food.

10. Observe what does and what does not agree with you in the way of food and drink; adhere to the one, avoid the other.

It is quite impossible to frame a dietetic scale which will suit every one, and each individual must be his or her own doctor or doctress, to a certain

extent, in this respect; but, by the exercise of a little judgment and reason, there will be no difficulty in discovering what things conduce to health or the reverse. In a general way the advice of the aged "Parr" is worth remembering, "Keep your head cool by temperance, your feet warm by exercise, rise early, and go to bed soon; and, if you are inclined to get fat, keep your eyes open and your mouth shut."

EXERCISE.

The most suitable time for taking exercise in the plains is in the early morning, so as to avoid the heat of the sun; and of all kinds of exercise, riding is probably the best and most enjoyable, as calling the muscles and lungs into full play, increasing the appetite, and promoting a circulation and a healthy action of the bowels. Of course, it is to be understood that this remark applies to those who are in the enjoyment of sound health and manly vigour. For invalids, walking or carriage exercise is suitable, according to the strength of the patient. Exercise, to be beneficial, must be short of fatigue, and commenced gradually.

Bicycling is strongly advised where it can be practised, for its gentle exercise with the modicum of exertion is a great inducement, and many ladies owe their good health to this.

Note.—Ennui, indolence, and neglect of exercise tend to obesity, anæmia, and constipation.

BATHING.

It is of paramount importance that a free action of the skin should be kept up, since it eliminates impurities from the blood by perspiration, and evaporation from the surface regulates the temperature of the body. Nothing conduces more to a healthy action of the skin than systematic bathing. The best time to bathe is in the early morning, almost immediately after rising from bed, or on returning home after a brisk walk or ride, while the body is still warm. Perspiration should never be allowed to cool on the body under any circumstances, or a chill may be the result, followed by a feverish attack or even more serious consequences; hence the clothes should be changed at once, and the body rubbed dry with a rough towel before proceeding to bathe. This is the safest course for men and women of delicate organization, who also should bathe in tepid water to counteract any tendency there may be to internal congestions. But provided the constitution is strong, and that there is no functional or organic disease of the liver or spleen, by far the most bracing and refreshing way of bathing is to take a plunge-bath while the body is hot and perspiring freely (as many do after playing golf), taking the precaution, however, to bathe quickly, so that reaction may be thoroughly established, which is known by a glow and comfortable feeling of warmth pervading the body.

After bathing, the body should be well rubbed down with a rough towel.

The cold shower-bath is that which is best suited to nervous people, and a most powerful agent in invigorating the human frame. It increases the muscular tone, and imparts a buoyancy to the spirits in a surprising manner; *but it is not suited to such as may be suffering from organic disease of any internal organ.* In order that the shock may be complete, water that has been exposed to the night air in porous gurrahs should be used.

The cold douche is the most common mode of bathing in India, by means of gurrahs containing cold water. The water may be reduced in temperature by exposure to the night air, or freshly drawn, according to the feelings of the bather.

SLEEP.*

A sound sleep at night forms a most important element in the scale of health, for if the nights are restless and sleep broken, the general health becomes impaired and the nervous system shattered. In order to procure a sound sleep at night, do not sleep in the day. That nature has ordained the night as the appointed time for sleep is indicated by the following facts. Towards evening there is a fall in the pulse, the circulation is languid, and the nervous force more or less exhausted, according to

* See, also, p. 102.

the amount of fatigue gone through during the day. These circumstances, combined with the horizontal position, the silence of night, and the absence of external impressions on the organs of sense, are favourable to sleep. To sleep in the day, then, is a perversion of the order of things. Temperate habits, a due regulation of the diet, daily exercise in the open air, and a mind free from anxiety and worry, will usually ensure a sound night's rest. During the hot months it is highly advisable, and, indeed, for most people absolutely necessary, to sleep under a punkah, or the system will rapidly succumb to the intense heat and profuse perspiration. Khuskhus tatties * should be worked only during the day, while the winds are blowing, and that they may be effectual in cooling the atmosphere of a room, one door of the apartment should remain open so as to create a draught. The tatties must be kept constantly wet, and not spasmodically so, or they are worse than useless, and may prove exceedingly dangerous, giving rise to fever and rheumatism by sudden alternations of temperature. If required at night-time, *which is not advisable*, a thermantidote may be put in operation to make them play, as the wind, which blows strongly during the day, usually lulls or dies away towards evening.

NOTE.—Do not sit or lie down quite close to a tatty; and never sleep in the open air at night

* Fans made of grass dipped in water.

time, or wind-stroke may be the result, producing paralysis of one side of the face.

SMOKING.

A too free indulgence in the use of tobacco is attended with evil consequences; digestion is impaired, the nervous system enervated, and the heart's action depressed.

The following rules should be attended to:—

1. Never smoke early in the morning on an empty stomach.

2. Never smoke immediately before a meal.

3. If you must smoke do so after a meal, when perhaps it assists digestion.

4. If the hand becomes tremulous, the throat dry, and the head aches from use of tobacco, give up smoking at once. If a non-smoker, there is no need to become one, but an old hand had better continue a smoker.

RESIDENCE IN UNHEALTHY LOCALITIES.

When obliged to encamp in unhealthy and malarious localities, attend to the following rules:—

1. Unless absolutely necessary, never go out before sunrise or remain out after sunset.

2. Always take a cup of hot coffee or tea before going out in the morning.

3. Kindle fires near the camp, since they ward

off malaria, and by decomposing it, render it inert.

4. Avoid unnecessary fatigue.

5. Guard against intemperance.

6. Take a dose of quinine early, every morning, on an empty stomach.

7. Beware of damp, and always sleep under cover, as during sleep the system is more susceptible to the action of malarious influences.

8. Always keep the feet dry, and wear a flannel belt round the loins, especially during the rainy season.

9. If living in a house, keep doors and lower venetians closed, etc.—if a tent, the purdahs—during the hours of repose.

10. Always endeavour to pitch your tent in such a way that it may be separated from the malarious tract by a sheet of water or belt of trees. (Marshmiasm is absorbed or rendered innocuous by its transit across water, and its poisonous properties are arrested and neutralized by trees.)

11. Select a gravelly or chalky soil, an elevated site with sloping ground so as to secure natural drainage, a southern aspect, and pitch the tent on the windward side of the malarious tract.

12. Avoid low and moist situations, alluvial and clayey soil, the flat banks of rivers, the bases of mountain ranges or terais, especially if abounding in vegetation which is undergoing decomposition.

NOTE.—Malaria is most virulent when the drying

process is most active, *i.e.* immediately after the termination of the rains.

13. Clear away deciduous leaves, decomposing vegetation and greensward; but leave all natural vegetation intact, or replace them by grasses and herbage, to form a matting of vegetation over the soil. It is best to avoid cultivation in the compound in a malarious district, for it is well known that disturbance of the soil is a fertile cause of outbreaks of malaria.

14. If about to build a house, attend to the preceding conditions, and build one with two stories and a double roof.

15. If the soil retains the damp, make the ground flooring to each room of a layer of pukka bricks; over this spread lime soorkee six inches thick, and finish with a layer of Portland cement or glazed tiles or dammer (a mixture of equal parts of soorkee and tar).

16. Sleep in a room in the upper story of the house; thus you will be freer of all ill-effects of malaria and damp, since malaria loves the ground, and damp and night dew cling to the ground also. See that the drainage is good.

17. If attacks of intermittent fever are constant, increase the dose of quinine (especially if the spleen enlarges), and leave the locality, if possible, for change of air or a sea voyage

18. Always drink filtered or boiled water.

WATER.

The quality of drinking water is a matter of life and death. Most intestinal troubles—cholera, typhoid, dysentery, filaria, etc.—are directly traceable to contaminated water, and probably malaria also.

Microbes are destroyed by *prolonged* boiling, therefore water should be boiled, and it is safer to boil it several times.

After boiling or filtration the water should not be allowed to stand in open vessels exposed to the air, or it may again be contaminated; it should be covered or kept in narrow-necked scalded bottles, with a plug of clean cotton wool in the top.

FILTERS.

These, as a rule, are useless in purifying water from germs; in fact, they breed germs. The *only filters which are of any use* are "THE PASTEUR"* and the "Berkefeld." These are effectual, and every one is strongly advised to invest in the means of obtaining germ-free water both for drinking and washing the food, especially the vegetables, as there is no doubt that typhoid and cholera enter the system through unfiltered water used for domestic purposes.

* It is most strongly recommended that all travellers should provide themselves with either a pocket "PASTEUR FILTER" or "Berkefeld."

It is well to roughly clean the water by filtration through a Chatee or sand, etc.; a little powdered alum may be added to the water, which causes the impurities to settle to the bottom, and the clean water may be drawn off and then filtered.

"*All*" filters require regular cleansing, and the directions sold with the apparatus should be studied.

Aërated waters *do* convey germs, and are not necessarily safe, unless made with sterilized water.

It is to be hoped that all communities will follow the example set at Darjeeling, and have all the water supply filtered on the Pasteur system.

CHOLERA EPIDEMICS.

The preventive measures against an attack of cholera are—

1. Healthy employment of mind.
2. Cheerful society.
3. Generous diet.
4. Temperance.
5. Prompt treatment of diarrhœa.
6. Pure drinking water (*vide* WATER).
7. Tonic medicines, of which quinine is the best.
8. Regular exercise, short of fatigue.
9. An absence of fear.
10. The avoidance of infected localities.
11. The immediate removal of cholera evacuations, which should be mixed with some disinfectant, such as carbolic acid or chloride of zinc, and

buried at a distance in a trench, or, best of all, *burned.*

A common cause of cholera, dysenteric and typhoid contamination, is the native method of straining food through a loin cloth or other filthy rag. This is a fact which every one can verify for himself.

HILL SANITARIA.

The advantages offered by the climate of the hills are the following :—

1. Elevation, ensuring a freedom from the blasts of the hot winds that sweep the plains.

2. Invigorating atmosphere, bracing up the system, removing debility, giving sound sleep at night, and raising the tone to par.

3. Malaria is of a milder type.

4. Immunity of cholera.

5. The climate is congenial to exercise in the open air.

NOTE.—(*a*) The hill climates are chiefly of use to convalescents from fever; to comparatively short residence in India; or to those whose strength has already been recruited by a furlough at home; and to all such as are in a nervous and debilitated state, but free from structural or organic disease of the lungs, liver, or spleen.

(*b*) Since hill-diarrhœa* and dysentery are

* "Sprue."

common diseases, those who visit the hills from the plains should be most careful to adapt their clothing to the change of climate, or internal congestion of some organ is almost sure to follow.

(*c*) The hill climates are unsuitable to those who are suffering from chronic diarrhœa or dysentery, or abscess of the liver, and for such a sea voyage is the proper course.

Vaccination. (See SMALL-POX, p. 35.)—It is the duty of every one to see that he has been not only vaccinated, but re-vaccinated efficiently. Small-pox in an efficiently re-vaccinated person is unknown. It is well to carry a supply of vaccine lymph. The lymph can be applied to the cleansed skin on a few careful scratch marks. A papule appears in about three days, and runs a course similar to a small-pox pustule. The upper part of the arm is the most convenient place, and the scratches should be in three or four places about an inch or an inch and a half apart. The arm should be carefully rested and guarded from irritation, and after about eight or nine days antiseptic lotion may be applied with comfort. If inflammation is considerable, foment the arm with hot boric lotion continually, and apply carbolic oil.

CHAPTER II.

FOOD, DIET, AND RECIPES.

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FOOD, DIET, AND RECIPES.

FOOD of all kinds, especially milk, may convey disease. It is important to avoid contamination by dust, dirty hands, flies, etc., and especially by impure water (see WATER, p. 15). Raw vegetables ought to be thoroughly washed in pure water. Always take food of some kind, and tea or coffee before making an early morning march, and do not take exercise after a full meal, especially if exposed to the sun. Alcohol is better avoided altogether, except occasionally after a heavy day's work.

Milk * should always be strained and boiled, and allowed to cool in covered vessels; a good method is to nearly fill narrow-necked bottles cleaned with boiling water, and then having closely plugged the mouth with clean cotton wool, to stand them in boiling water for half an hour, taking care not to let the wool get wet. A traveller's "HAWKSLEY'S

* Cow's milk when it reaches the stomach *always* clots, but if the digestion is good this produces no discomfort. "Barley water" and "lime water" break up the clot. Human milk and goat's milk do not form such heavy clots.

Milk Sterilizer" will be the means of saving many children and also adults from typhoid and dysentery and diarrhœa, and enable a nutritious diet to be given with perfect safety.

Jellies are of very little nutritious value. They are agreeable adjuncts to invalid diet, and help by aiding digestion. A man fed upon jelly alone would die of starvation.

Cooling Drink.—Nitre 2 drams, juice of two limes, water two pints, with sugar.

Imperial Drink.—Cream of tartar (bitartrate of potash) 2 drams, juice of two lemons, peel of one lemon, boiling water one quart. Cool, strain, sugar to taste, and drink *ad lib.*

Diets.—Milk should be sipped, and not taken in large quantities at a time. Hot milk (not warm) agrees best, and is very stimulating.

Farinaceous diet means milk, milk puddings, fish, congee, rice, vegetables, sago, sago and milk.

Slop diet.—Beef tea, broth, light soup, congee, milk, soda and milk, and no solids whatever.

Beef Tea, as usually made by "simmering," is very nice, but contains very little nourishment. To be nourishing it must be made as follows:—Cut up lean meat into small pieces, put into a clean pot, add sufficient cold water to cover it well, add a pinch of salt, and stir well. Place the pot

inside a saucepan containing some warm water and then put on a slow fire and *do not let the water become hotter than the hand can bear*, and cover up with a closely fitting lid. In about an hour, take out the pot and strain off the red coloured *beef juice*, which must be set aside. A little more water can then be added to the meat and *boiled* (this will extract the flavouring matter); this is afterwards strained off and added to the "beef juice." When required for use this mixture can be heated, when it will become thicker and lose the mawkish taste. It contains all the nourishment of the beef as well as the flavour. Must be prepared fresh every day or oftener. In cases of severe illness the "beef juice" alone can be given cold, but it is rather nauseating unless mixed with sauce.

Liebig's Extract contains no nourishment, but it is a strong stimulant, and is exceedingly useful for exhaustion, especially when made with very hot water, or added to beef tea as made above for flavouring.

There are many valuable and reliable condensed meat extracts sold; amongst these may be mentioned "Wyeth's Beef Juice," "Valentine's Meat Juice," "Bovril," and "Brand's."

Barley Water.—One table-spoonful of barley boiled up with water and strained, improved by addition of lemon juice, helps to soften the clot of milk in the stomach, and is a pleasant, bland drink in

fevers, and especially in inflammation of the bladder, kidneys, or private passages, when it should be taken very freely.

Egg and Brandy Mixture ("Egg-flip").—Yolks of two eggs beaten up with one table-spoonful of brandy, and milk and sugar to taste. Improved by sprinkling nutmeg gratings on the surface. May be made with port wine, or the milk may be warmed.

CHAPTER III.

FEVERS.

NOTE.

In all fevers produced by germs there is probably produced in the body a protective substance, antitoxin, which is antagonistic to the disease. The successful combating of the disease depends upon the strength of the individual, the amount of antitoxin produced, and the virulence of the disease germ. Modern treatment aims at introducing into the body an artificial antitoxin; this has been accomplished in diphtheria and blood-poisoning (pyæmia), and possibly in cholera, typhoid, and plague. In vaccination a modified form of virus is introduced into the system, which produces an antitoxin which protects from small-pox.

CHAPTER III.

FEVERS.

FEVERS, for the most part, commence in the same way—with lassitude, headache, weakness or irritability of the mental condition, and pains in the back and limbs. Then follows heat of the skin, quick pulse, furred tongue, disordered stomach, scanty and high-coloured urine, with thirst.

General Treatment.—Rest in bed in a well ventilated room, avoidance of chill, free action of the bowels. Light nourishing diet and plenty of bland fluid drinks. No alcoholic stimulants should be given, except in cases of great prostration, when it may be the means of saving life.

Ardent Fever. (See SUN FEVER, p. 36.)

Dengue or Dandy Fever.—General feverish disturbance, with strong rheumatic pains in body, limbs, and eyeballs. May commence with sudden pain in a large joint. Sometimes the first thing noticed is stiffness of the fingers, spreading into stiffness and pain of the whole limb. The temperature rises to 103° or 104°. Vomiting is common.

A rash breaks out in bright red patches, and subsides in a few hours. After twenty-four or thirty-six hours the temperature falls, without any sweating, to normal, and the discomfort ceases. An interval occurs of several days, and then the rash appears again, with much itching, and no fever, as a rule, but with some return of the pains.

Appears in epidemics, and very few escape. It is scarcely ever fatal.

Treatment.—Laxative at the onset. Rest in bed, and, when the fever abates, quinine or nux vomica or Fellow's Syrup.

Hectic Fever. *Cause.*—Long-continued discharge of matter from abscess or lung, as in phthisis. If the discharge is kept free from germs, hectic does not occur.

Symptoms.—Feverish headache and restlessness, occurring towards evening and abating in the morning. The strength gradually fails, perspiration is profuse, and diarrhœa ensues.

Treatment.—If the discharge of matter can be rendered aseptic, hectic disappears. (See WOUNDS, p. 129.)

As much nourishment as possible, in small quantities, often repeated. Fellow's Syrup, tonics.

Malaria. Ague. Intermittent Fever.—Characterized by paroxysms of fever occurring at regular intervals.

Varieties.—1. Quotidean. A paroxysm once in every twenty-four hours; lasts about twelve hours.

2. Tertian. A paroxysm once in every forty-eight hours; lasts about nine hours.

3. Quartan. A paroxysm once in every seventy-two hours; lasts about six hours.

These varieties may occur together in the same individual. The period which intervenes between the end of one attack and the beginning of another is called the *intermission*. If the fever does not entirely disappear, but only lessens or *remits*, it is called "remittent fever" (see p. 31).

Symptoms.—For some days before the attack there is often exhilaration of body and mind, with irritability. An ague fit consists of three stages—a *cold, a hot, and a sweating stage*. The first or "cold stage" is ushered in by languor, listlessness, yawning and stretching, and a sense of oppression at the pit of the stomach. To this succeeds shivering, headache, pains in the body and limbs, and shrivelling of the skin, which becomes rough or goose-skinned. The urine is scanty and the pulse small and frequent. This stage varies in length from an hour to two hours and a half, and passes into the second or *hot stage* and is one of reaction. It commences with transient flushes of heat, which gradually increases to a steady burning heat of the whole body, until the temperature is raised above normal. The face is flushed, the temples throb, the mouth is parched, thirst is

urgent, the pulse full and hard, the urine high coloured and scanty. The duration of this stage is from three to eight hours, and passes into the third or "sweating stage." Perspiration breaks out over forehead, neck, face, and bends of the joints, and soon becomes profuse and general. Thirst and heat disappear, the pulse becomes natural, and the patient feels himself again, but weak. The temperature begins to rise several hours before the paroxysm commences, so that although the patient feels cold he is really hotter than is natural. For some days after the disease appears to have departed, a periodic increase of the temperature may be detected about the time of the old paroxysm, and so long as this continues the patient is not cured.

Treatment.—Shorten the cold and hot stages by applications of warmth in bed and free drinking of hot tea, congee, or water, or imperial drink (p. 22). Encourage perspiration, but take great care to avoid chills. Quinine must be given immediately after the attack or towards the end of the sweating stage, and taken in from 5 to 10-grain doses every three or four hours during the intermission, but it should be omitted if it causes deafness, or noises in the head, or much singing in the ears. The bowels should be kept freely open. Old hands in ague usually find out by experience the dose that suits them best. When ague recurs a change of climate is necessary, for successive attacks lead to early wrecking of the constitution.

In obstinate cases of recurrent fever Warburg's Tincture * (three to six tabloids) is necessary. It should be taken just before the attack, and repeated afterwards; the tabloid form is most convenient.

Tabloids of arsenious acid $\frac{1}{100}$ of a grain may be taken in chronic cases or very malarious districts; one or two should be dissolved in water and taken three times a day one quarter of an hour after meals. An overdose produces pains in the bowels and diarrhœa, and irritation and congestion of the eyes, but it may be taken for a long time, and is a very powerful nerve tonic.

Malarial Remittent Fever (Jungle Fever).—Is an exaggerated intermittent fever, and often commences as such. The fever does not disappear altogether during the intermissions; it only lessens or "remits." The symptoms are those of ague, without any distinct cold stage. The hot stage is longer, the prostration is greater, and there is generally some delirium, with vomiting and jaundice. The remissions occur with perspiration and a fall of the temperature, generally in the early morning. Unfavourable signs are increasing weakness, blood in the stools or urine, cold sweating, and insensibility.

Treatment.—The bowels should be carefully regulated. Imperial drink should be taken freely,

* See p. 150.

or citrate of magnesia. Quinine should be given when the skin is moist, in a dose of 10 to 15 grains, and continued in 6-grain doses every three or four hours until the skin, becoming hot and dry, again betokens another paroxysm; it should be recommenced until an impression is produced as shown by a day or two being passed without an attack, after which the dose is to be reduced. As soon as possible a change to a healthy climate must be made. It is absolutely essential to have the most nourishing food that the patient can take, and to keep up a free action of the bowels. Jellies are not nourishing. (See BEEF TEA, p. 22.) Quinine failing to influence fever, Warburg's Tincture should be taken. (See p. 150.) Arsenious acid ($\frac{1}{100}$ grain) tabloids taken three times a day, after meals, are very useful.

Malaria, Masked.—A slight febrile condition which may be remittent or intermittent. Inhabitants of malarial districts are prone to this condition, especially in the autumn and winter. Burning of the palms and the soles are pretty constantly present. It may continue for a long time, and proneness to full attacks are not an especial feature, but anæmia and debility and depression supervene. Delirium, mania, and many obscure conditions can be traced to it by means of the microscopical examination of the blood by the surgeon.

Treatment.—A liberal diet, with small amounts of

stimulants, wine, and coffee. Quinine, 2 grains or more, every day, and tabloids of arsenious acid grains, $\frac{1}{100}$ grain.

Malaria. *Hints for Prevention.*—All depressing agencies predispose to malaria.

Malaria lies low, therefore avoid sleeping on the ground. Malarial exhalations are least at noon, most at morning and evening; therefore keep your house during the fatal hours of sunrise and of sunset.

When wet, make a complete change of clothing as soon as possible, and if this is not possible, keep the body warm by any means at hand; avoid alcoholic stimulants, and take coffee.

Take regular exercise, the best times being from 6 to 8 a.m., or from 4.30 to 6 p.m.; but carefully avoid fatigue, for this predisposes to malaria.

Have cement basements to the house under the whole occupied area, to cut off sub-soil emanation and damp.

Have plenty of vegetation round the house, and do not clear away natural vegetation (see p. 14).

In notoriously malarial districts take 2 grains or more of quinine daily to ward off attacks. Use only filtered water. (See FILTERS, p. 15.)

The cause of malaria is generally supposed to be "plasmodium malariæ," which lives in the red cells of the blood.

Measles.—Highly contagious. It is unusual to have a second attack. The onset is from about eight

to fourteen days after exposure to infection, ushered in by symptoms of an ordinary feverish cold. There is often sickness and intolerance of the eyes to light. The rash appears about the fourth day, first on the face and chest looking like flea-bites, but soon becoming larger and of a dusky red colour, and lasting and fading during ten days. The temperature usually keeps below 102°. Inflammation of lungs is prone to occur, also diarrhœa.

Treatment.—Put in a warm bath, then dry the skin thoroughly, carefully avoiding chill. Unless there is a cough there is no need for medicine. May drink freely of lemonade, etc., or imperial drink (p. 22), and take beef tea, or milk, or broth; but no solid food to be taken whilst there is fever. If the eruption disappears suddenly, give a hot bath. For DIARRHŒA (see p. 58), COUGH (see p. 57). Isolate from other children for three weeks at least.

Rheumatic Fever. (See RHEUMATISM, p. 97.)

Scarlet Fever or Scarletina.—Scarletina is another name for scarlet fever, and signifies the same. Is not common in India or the Far East, and generally occurs from contagion of fresh arrivals from Europe. Is very contagious, and rarely occurs twice in the same person.

Symptoms.—In from twenty-four hours to a few days, symptoms of violent fever occurs, shivering, sore throat, and sometimes sickness pains and sometimes diarrhœa. The throat is a vivid red colour.

The temperature usually is high from the first, 104° or 105°. The rash appears often on the second day, appearing like scattered tiny flea-bites, which, multiplying and spreading, form a general bright scarlet blush all over the body. The tongue looks as though powdered with cayenne pepper. The rash lasts till the end of the week, gradually disappearing and leaving the skin scurfy and flaked. The temperature gradually falls. It is especially liable to affect the kidneys. In measles the rash is dusky red and blotchy and the temperature is not so high.

Treatment.—Strict isolation for two months, and, indeed, as long as there is any scurfiness of the skin or discharge from the ears, nostrils, eyes, or private parts. Careful disinfection. In most cases little but rest in bed and a well-ventilated but warm room and nourishing diet is required. Thirst should be assuaged by barley water, lemonade, and especially imperial drink (p. 22). Swelling of the face and legs show that the kidneys are affected.

Small-pox (Variola).—About twelve days after infection the disease begins with shivering fever, headache, pain in the back, and sickness. On the second day pimples appear on the forehead, and if the hand be passed across it, it feels as though there were shot underneath the skin. The pimples become blisters, with a depressed centre, and at the end of the week contain matter ("pocks"), and, in a few more days, dry up and form scabs. When the

scabs fall off there will be "pitting." In severe cases the pocks run together (confluent small-pox). The temperature is very high at first, and falls with the appearance of the rash, and again rises when the pocks contain matter. When bleeding into the skin occurs, and there is much fever and collapse, it is called black-pox.

Convalescence is slow, and there is often disease of the eyes, ears, or joints following.

Treatment.—Isolation. Disinfection (p. 61). Rest in bed. Keep up a moderate action of the bowels. The eyes should be bathed with boric acid lotion (p. 136). The pocks to be covered with carbolic oil twice a day, in order to prevent decomposition, which is the cause of the secondary fever. Stimulants are generally required about the second week, especially egg and brandy mixture. When the pustules have burst and there is much fœtor, sponge the skin clean with warm carbolic lotion, later if not too weak, a warm bath with carbolic acid added in the proportion of one table-spoonful to the gallon. During convalescence give quinine.

Modified Small-pox occurs sometimes in those who have been vaccinated; it is very mild, and seldom runs beyond the stage of shotty skin, giving no more inconvenience than an attack of measles. Small-pox is unknown after re-vaccination.

Sun Fever.—Common after exposure in the sun during the day. Slight feverishness causes restless

nights and loss of appetite, which quickly ameliorate after rest and purgation, or bromide of potassium 10 grains, in water every four hours, and cold sponging. What is called "Ardent Fever," occurs especially during the hottest months of the year, great headache, throbbing and nausea, high fever, and sometimes shivering lasts several hours and gradually passes into insensibility or death. The treatment is the same as for sunstroke, great exhaustion occurs afterwards, and careful feeding and mild stimulants are required.

Typhoid Fever ("Enteric Fever," "Gastric Fever").—This is not typhus fever (see p. 38). It is not contagious.

Cause.—A special microbe conveyed principally by water, and sometimes by foul emanations. Probably gains entrance by food that has been washed, and milk contaminated with water or dirty straw, etc.*

Symptoms.—Sets in gradually with slight diarrhœa, clay-coloured stools, and feverishness, but often constipation, dry brown tongue, and vomiting, progressive weakness and increase of fever, abdominal pain and delirium, and in bad cases running into insensibility and death. During the second week of the fever, light small rose-coloured spots disappearing with pressure of the fingers, show upon the belly. There is frequently blood in the motions.

* Ought to be avoided by more care on the part of the person responsible for the catering. (See pp. 15 and 21.)

The usual duration is about four weeks. Many cases which were formerly thought to be bad jungle fever, typho-malarial fever, etc., are now known to be typhoid. It especially attacks robust young men on their first arrival in India, and commonly takes a very acute and rapid course, with death in about ten days. High fever, abdominal pains, diarrhœa at commencement, quickly ushers in low mutterings, delirium, insensibility, and death. The bowels are always ulcerated.

Treatment.—No solid food whatever must be taken until one week after the temperature remains normal throughout the day. No fruit allowed. All food must be strained through fine muslin, for any solid particles might cause death by breaking through an ulceration in the bowels. Milk (boiled), milk and soda, and beef tea, and egg and brandy mixture only. Quinine, 3 grains every four hours (tabloids to be powdered). Brandy, and egg and brandy for exhaustion with rapid pulse. The stools must be disinfected and burned.

Typhus Fever.—Connected with overcrowding, filth, and squalor, and never occurs in well-drained and ventilated places. Is contagious.

Symptoms.—Sudden fever with headache, pains, and chills, lead to complete prostration with a marked aspect, patient lies on back, dull and partially deaf, with half-open eyes and mouth, and a dusky flush over the face. The fever rises to 104° or

105° at end of week, and declines during the second week of illness, when recovery takes place or the symptoms grow worse until death about the third week. At end of first week there is a characteristic "mulberry"-coloured rash, generally appearing on wrists and then on trunk. There is *seldom diarrhœa or pains in the belly.*

Treatment.—Slop diet, and usually egg-flip or brandy for the prostration. Imperial drink. Bicarbonate of potash, 20 grains, every four hours, with tincture of nux vomica, 5 drops.

When the fever abates, give quinine.

CHAPTER IV.

GENERAL DISEASES, ALPHABETICALLY ARRANGED.

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GENERAL DISEASES, ALPHABETICALLY ARRANGED.

Abscess or Gathering. (See also GUMBOIL, WHITLOW, BUBO.)

Acute or hot.—The part is first inflamed, the centre becoming fluid and "ripening." As the swelling increases the pain increases, the skin over the abscess becomes stretched and hot, red and glazed. The matter finally bursts through the thinned skin, and becoming more liquid, gradually dries up. There is usually fever, headache, and pains in the back and joints in proportion to the hardness of the part and the health of the individual. The pain is most severe where the skin is thickest. (See WHITLOW, p. 110.)

The mischief is entirely caused by germs, and if the part were aseptic no inflammation would occur.

Cold or chronic abscess takes a long time in forming, and is not usually accompanied by inflammation until the surface is reached or they are opened without antiseptic precautions; they generally

occur in scrofulous people, and can only be treated by skilled operators.

Treatment.—Open the bowels well. Give quinine. Apply carbolic oil over the skin and over that apply antiseptic poultice (p. 146), or lint wrung out in hot carbolic lotion (p. 138) and covered with oil-silk or a leaf, etc., to avoid evaporation. If the swelling is soft and angry looking, it may be lanced with a clean lance or knife soaked in strong carbolic lotion (p. 137), and so much pain avoided. After the matter has come away, apply carbolic oil freely on lint until healing occurs. It is well to bathe it in carbolic lotion twice a day, keeping the wound clean. Do not squeeze out the matter; if necessary syringe it out with carbolic or soloid lotion. Do not apply water dressings; they increase the putrification, unless antiseptics are added. A plain poultice made without antiseptics increases the risk of putrification and spreading, and crops of boils often occur around.

Anæmia (White Blood, Cachexia).—Is very common, and usually follows the enervating effects of hot climates. Is due to want of iron colouring matter in the red corpuscles of the blood, malaria, or convalescence from any serious illness. Sleeplessness and a continually tired feeling are usual, also headache and constipation.

Treatment.—Open the bowels well. (See CONSTIPATION, p. 54.) Take very nourishing food, especially

digestible meats, beef tea, etc. Quinine and iron is by far the most efficacious remedy. Quinine in powder or tabloids with iron pills or tabloids, three times a day after meals, with occasional addition of nux vomica tabloids before meals. In chronic and malarial cases tabloids of arsenious acid may be taken twice or three times a day with meals. Gentle exercise must be taken, and fatigue always avoided. If there is indigestion present, nux vomica and soda mint tabloids after meals, or dilute nitric acid 10 drops, and nux vomica and kreat.

Apoplexy.—Generally falls insensible, with flushed face, laboured breathing, and full, slow pulse. The face may be distorted and convulsions occur on one side of the body. There may be previous warnings by headache, giddiness, and constipation, and the attack may occur slowly and be similar to a fainting fit. There may be paralysis and distortion without insensibility, but with inability to speak. May pass off or merge into insensibility, in which the patient dies. Caused by rupture of a blood vessel in the brain. (See Insensibility, p. 80.)

Treatment.—Absolute rest in recumbent position, bowels freely open, cold to the head. Keep watch for bed sores (see p. 119).

See that urine is passed during the day; if it is not, endeavour to draw it off with a catheter (p. 139).

Asthma.—Paroxysmal attacks of difficult breathing. Few cases are alike, and no treatment is

efficacious in all cases, and the same applies to climate.

Treatment.—Half a grain of cocaine dissolved in water, and half this taken generally gives instant relief, but the effects do not last. Ipecacuanha wine used in a scent spray and inhaled gives relief in bronchitis cases. Datura tatula or stramonium in cigarettes. Nitre dissolved in water and dried on blotting-paper and burnt and the fumes inhaled.

Belly, Wounds of. (See p. 130.)

Bilious Attack. *Symptoms.*—"Bilious headache," lassitude, dyspepsia, bad taste in the mouth, coated tongue, and irregular action of the bowels.

Treatment.—A smart purge at night and a saline taken the first thing in the morning. Soda mint or potash and nux vomica. Avoid solid food and alcohol; take light soup or beef tea, etc. Moderate exercise. The cold bath omitted during the attack. Afterwards take 10 drops of dilute nitric acid in water, or better in infusion of chiretta, kreat, or any vegetable bitter or nux vomica.

Bilious Colic. (See Colic, p. 53.)

Bladder.—Inflammation may be caused by injury, exposure to cold, or gout, irritation of a stone or stricture or extension backwards of inflammation of the private parts (urethra) as in gonorrhœa. An unclean catheter is a frequent cause.

Symptoms.—Pain in the lower part of the belly,

and soreness on pressure between the fold of the groin and lower part of the belly. There is generally a sense of weight and burning in the part. The urine is passed frequently and in small quantities, often with great straining and aggravation of the burning pain. The urine is often thick and blood-stained, and may be offensive.

Treatment.—Hot baths and fomentations to the part. The bowels to be freely opened. Absolute rest in bed. Barley water and imperial drink (pp. 22, 23) very freely taken. Ten grains of boric acid dissolved in water or milk to be taken every four hours. Diet—milk, beef tea, and broth only, until pain is gone. No coffee, tea, nor stimulants.

In gouty cases give bicarbonate of potash, 20 grains, every four hours, and imperial drink as much as can be taken.

Chronic Inflammation.—May ensue upon the acute form, but is generally caused by gout or gravel, or in elderly people, from enlargement of the "prostate gland" at the neck of the bladder. A surgeon must be consulted; meanwhile, give boric acid 10 grains dissolved in plenty of water or boiled milk, twice a day; live on the lightest possible diet, and keep the bowels freely open.

Irritability.—Shown by frequent desire to pass water, or by pain on passing water in elderly persons, is generally caused by the enlarged prostate gland at the neck of the bladder, or from *stone* (especially when pain occurs at the end of passing water, and in

the tip of the penis, and there is blood in the water). Constipation also causes discomfort, also fissure of the anus (p. 69). Worms in children (p. 111). Cold or sudden change to a colder climate.

Bleeding. (See HÆMORRHAGE, p. 127.)

Blood-spitting may be due to wound of the tongue, tooth, nose bleeding, congested throat or lungs, or more rarely consumption, a blood tumour (aneurism), or disease of the stomach.

Boils.—Small abscesses at the root of the hairs. Often appear in crops, and depend upon bad health.

Treatment (see ABSCESS, p. 43).—Apply carbolic oil at once, this often prevents further trouble, especially if the central hair be pulled out. Laxatives and tonics are generally wanted.

Do not apply an ordinary poultice; an antiseptic poultice (p. 146) is very beneficial, and quickly relieves pain. When the discharge is becoming thin, powder the part well with boric acid powder, after washing with carbolic lotion.

Brain. (See CONCUSSION, COMPRESSION, pp. 81, 82; APOPLEXY, p. 45.)

Brain, Inflammation of.—Chief signs, delirium, vomiting, headache, fever.

Treatment.—Cold to the shaved head. Purge by calomel or sulphate of soda. Absolute rest and

quiet. Bromide of potassium, 10 grains, in water every four hours.

Breast (see also NIPPLES, p. 91), **Inflammation of.**

Cause.—Injury, sore upon, or any irritation of the nipple, over-distension with milk.

To Prevent.—Keep the nipple clean by gentle washing and occasional bathing with carbolic lotion (p. 138), and do not allow the breasts to become over-distended, but draw off the milk by suction. (In the absence of other contrivances, a soda-water bottle with a hole knocked in the bottom, the nipple to be placed in the neck, and suction to be made at the broken end protected with a handkerchief.) In many cases where the milk is blocked, gentle persistent suction will start the flow and save inflammation. Do not allow the nurse to rub the milk away or "break the strings of the nipple," which is a common cause of abscess.

Painful or tender breasts in young people are common, and generally occur in those anæmic or weak. Tonics—iron and quinine—with occasional doses of bromide of potassium, 10 grains, in water twice a day, and cold applications.

Do not leave the nipple in the child's mouth when it is not sucking.

If abscess (p. 43) form, apply fomentation. If lanced, cut in a line radiating from the nipple. Stimulating diet and quinine and iron. Free action of the bowels.

To dry up the milk, paint breasts with liniment of belladonna, apply cold, and take quinine.

Bronchitis (Inflammation of the Air-Tubes of the Lung).

Acute.—Not common in hot climates. Generally follows a chill. Commences with tightness of the chest and difficulty of breathing. There are feverish symptoms, which abate as soon as the expectoration becomes free. In unfavourable cases the cough is tight, the breathing remains difficult, and the fever high, and suffocation ensues. In children a "croupy cough" generally denotes some congestion of the windpipe.

Chronic.—An acute attack may pass into a chronic state, characterized by wheezy breathing and expectoration. Easily aggravated into the acute form.

Treatment.—Rest in bed; hot poultices to the back and front of the chest, ipecacuanha or antimonial wines, 10 drops, every four hours, in water, until the cough is easy. Dover's Powder, 5 grains, and repeated if the pain is severe. Plenty of warm drinks; lemonade and bicarbonate of potash, 10 grains, makes a pleasant effervescing beverage. A child bears almost as much ipecacuanha as an adult.

Bronchitis, Capillary.—Bronchitis extending to the smaller tubes and air-cells, which speedily become blocked, and suffocation ensues.

The fever is high, and the breathing difficult, and the face dusky.

Treatment.—Use poultices with mustard freely, and push the ipecac. or antimony wine in double doses. Rouse the patient up occasionally, and encourage cough. In case of great weakness give brandy.

Bubo, or Bubœ.—An inflamed gland in the groin, occurring from irritating discharge from the privates or buttocks, or from a sore on the heel or ankle from a boot rub.

Symptoms.—Pain on walking, and a tender, inflamed swelling in the fold of groin. It generally becomes an abscess.

Treatment.—Cure the irritation causing the bubœ, and the latter will often subside of itself; but if it does not, apply hot antiseptic poultices to the bubœ itself. This will either disperse the swelling or cause abscess which bursts. (See Abscess.) Keep bowels free, and take quinine.

In syphilis the glands are enlarged, but do not tend to form abscesses. They should not be poulticed or opened, and will disappear upon taking mercury and iodide of potassium.

Catarrh (Cold in the Head).—Really means any inflammation of the air-passages, with a running discharge from the nose.

One tea-spoonful of paregoric in water, repeated three times a day, will cut it short, or the same

quantity of ammoniated tincture of quinine in a little water; use a hot foot-bath, with a table-spoonful of mustard in it, at bedtime.

Ten grains of Dover's Powder at bedtime, after a hot bath, is also a good method for the strong.

Eucalyptus oil in smelling-salts or inhaled when poured upon the surface of hot water. Menthol snuff is strongly recommended.

Chest, Wounds of (see p. 130).

Cholera.—Caused by a microbe which is swallowed, generally in the food and drink. Typhoid (p. 37) is caused in a similar manner.

Symptoms.—The seizure may occur suddenly or after feelings of illness, with painless diarrhœa, lasting for several days. Griping of the bowels, followed by burning pains in the stomach, with purging and vomiting. Motions and vomit are like rice water. Great thirst, and no urine passed. The skin is shrivelled, and the temperature below normal, and there are painful cramps in the limbs. Exhaustion increases, and the patient dies. Hiccough occurs before death, and the skin may feel warmer. In favourable cases the skin warms, pain, vomiting, and purging gradually cease, and sleep ensues. The danger is not over until urine is passed, usually after three days.

Reactionary fever sometimes sets in after recovery from the collapsed state; there is often a rash and delirium, the symptoms gradually abate or death occurs.

Distressing hiccough often follows.

Treatment.—Chlorodyne, 30 drops, in half a wine glass of brandy and water at once, and repeated every two or three hours, if necessary; or half a tea-spoonful of spirits of camphor every half hour; or 10 grains of Dover's Powder. Keep as warm as possible, mustard poultice over the pit of the stomach. May drink very freely of water, lemonade, or imperial drink. Relieve cramps by rubbing and warmth. If there is collapse, and much vomiting, it is of no use to give medicine, for it will not be absorbed, and all the attention must be concentrated upon keeping the patient warm and still. Feeding, if the stomach will retain anything, must be by concentrated liquid food, beef tea (p. 22), etc., until the stools are of a natural colour. When recovering give nux vomica and quinine freely.

Prevention.—Always use sterilized water, both for drinking purposes and for washing the food.

Colic.—Griping pains in the belly with diarrhœa.

Biliary Colic.—Due to passing gall-stones (see p. 70).

Kidney Colic (see p. 85).

Intestinal Colic.—Due to irritation of poisoning material in the gut, bad fruit, or milk, poisons, etc. Diarrhœa or vomiting often give relief. May follow indigestion, or may be caused by a chill, such as sitting under a punkah without sufficient covering over the belly.

Treatment.—A dose of castor oil followed by a

few drops of chlorodyne in water. A dessert-spoonful of Worcestershire sauce and half a tea-spoonful of bicarbonate of soda in water, or soda mint tabloids. Hot foments to the belly. Liquid light diet, until the pain and irritation has subsided, then nux vomica.

Concussion (Stunning). (See INSENSIBILITY, p. 81.)

Constipation. *Ordinary Acute Constipation.*—May be due to errors of diet, change of climate, cold, inflammation of bowels, or other serious mischief when there is much pain or depression.

Habitual or Chronic—The most constant cause is blunted sensitiveness of the bowel, which gradually, but slowly, surely follows neglected calls to daily regular evacuation, combined with sedentary occupation. The nerves of the rectum become less sensitive, and the bowel dilated and weakened, the fœces hard and dry, and difficult to be expelled, and, through want of elimination, deleterious poisons are formed in the bowel and absorbed by the system; then follow anæmia (p. 44), headache, indigestion, insomnia (p. 102), piles and all the minor ills to which flesh is heir, together with the graver evils of obstruction and inflammation of the bowels. Amongst other causes are indulgence in strong tea, much milk, or too many eggs; with invalids, concentrated food-stuffs, such as beef tea; lead poisoning. Owing to the irritation of solid

hard fœces, slight diarrhœa often alternates, and when the motions are blood-stained, or there is matter passed, there may be piles or some more serious disease.

Treatment.—Ordinary constipation arising from change of living, etc., demands a simple laxative such as a compound colocynth pill (p. 9), or any laxative to which one is accustomed.

For habitual constipation, for those with sedentary occupations, a brisk morning walk in the open air is often all that is needed, with perhaps the addition of bulky vegetable food to the diet. The evacuation may be helped by enemata (p. 141) for a few mornings until the bowels show signs of responding. A tumblerful of cold water injected into the rectum whilst standing, or the injection of a tea-spoonful of thick glycerine (there is a special syringe for the purpose) powerfully stimulates the bowels. A piece of soap the size of half a little finger is very useful for children when inserted into the bowel. Suppositories (p. 149) made of glycerine cause a copious and painless motion very quickly. In cases where the bowel is much loaded, or there is much distension, the enema (p. 141) should be used before purgatives. The most useful laxative is Cascara Sagrada, in simple or compound form; the simple form should be taken every night in sufficient dose to ensure one soft natural motion every morning, the dose varying with the individual, and if the dose of the simple tabloids

required is large, then the compound tabloids should be taken in smaller doses. After a week, or in obstinate cases a much longer time, the dose should be diminished, and now and then omitted, and finally stopped, the most important point being not to allow any straining. Saline waters —such as Freidrichshall, Carlsbad, Pullna, or Huniyadi Yanos water—taken in a full tumblerful of water on rising in the morning are valuable occasional aids, but, like all other remedies, they must not become a habit. There is no need to waste money or energy upon methods which nature will, if allowed to do so, perform in her own healthy way.

Consumption (Phthisis, Tuberculosis of the Lung).—Not common in hot climates, although the natives seem to be increasingly liable to it. Spitting of blood is a common symptom, short dry cough, and increasing weakness precedes more profuse expectoration and hectic (see p. 28).

Treatment.—Must reside in a healthy, dry, warm climate. Good food and cod liver oil is necessary. Creosote made from beech-wood oil should be taken in capsules regularly, and quinine and iron tonics occasionally. Fellow's Syrup is most valuable.

Convulsions. (See Apoplexy, Epilepsy, Tetanus, Hydrophobia, Teething, Worms, Poisoning, Spasmodic Croup.)

In children, are easily caused by any derangement of the digestion or the irritation of worms.

Place in a hot bath, and keep the head cool, place two grains of calomel on the tongue, and see that the bowels are well opened.

Cough. (See BRONCHITIS, p. 50.)

If the cough is tight, give ipecac. If the cough is irritable add paregoric, until the irritation is relieved.

Cramp or Spasm is an involuntary contraction of the muscles; generally occurs in the legs. May be general.

For cramp in the legs, stretch them out and rub briskly, and apply hot fomentations, if at hand. Tie a band round the limb (if there are no enlarged veins) whilst the rubbing continues.

Often associated with constipation, so take a purge.

Croup. (See DIPHTHERIA, p. 60.)

Croup, Spasmodic (*Child Crowing*).—Is rare after the age of twelve months, and then only in weak, scrofulous children.

Symptoms.—Convulsion may occur upon waking from sleep. Violent efforts to draw breath, and struggling till black in the face and limbs are convulsed, at length the breath is drawn with a loud crow. Several attacks may follow. Frequently associated with teething and worms.

Treatment.—Be sure it is not caused by food in the throat. Dip the hands suddenly in cold water

and dash cold water on the face, and apply very hot sponges to the throat or immerse the child in a hot bath. When the attack is passed, give castor oil and a mixture of bicarbonate of soda and bromide of potassium (p. 145).

Croupy Cough. (See Bronchitis, p. 50.)

Deafness. (See Ear, p. 63.)

Delirium Tremens.—Caused by continued effects of alcohol with deficient nourishment. May occur after a single drunken bout. A person addicted to drink loses his appetite, and in order to keep up his strength takes more alcohol in place of food. Tremulous hands, irritable temper and sleepless nights follow, the eyes look staring, and he often suffers from hallucinations of black animals. Irrational behaviour is usual.

Treatment.—The great prostration is the evil to combat. See that the bowels are open. Recovery depends upon the power to take food. Give beef tea (p. 22), milk and egg flip as much as he can digest. Sleep and calm may be procured by potassium bromide, 20 grains, every four hours, or sulphonal or chloral. Opium not allowed. When tongue is clean, give quinine and iron tonics, and especially nux vomica.

Diarrhœa.—In all cases pure water is essential (see p. 15). Should never be neglected. All chronic

diarrhœa needs change of climate, and is liable to return. There are many kinds which must each be carefully distinguished before they can be treated, for in some cases diarrhœa is an effort of nature to get rid of irritation.

1. Diarrhœa (Irritative).—From unwholesome food, such as unripe food, cucumbers, shellfish, etc., or from foul smells. (See Colic, p. 53.)

Treatment.—Purgative, followed by bowel tonics, such as nux vomica, and soda, and ammonia; later, dilute nitric acid and nux vomica or kreat.

Diet.—Farinaceous or slops.

2. Diarrhœa from Atmospheric Changes or Chill.—Especially occurs after fatigue, when exposed to chill by setting in draughts, or lying under punkah, etc., whilst perspiring. Common in anæmic people.

Treatment.—Prevention better than cure; wear flannel belt, and change throughout directly upon ceasing exercise; do not go out in the morning without a cup of warm tea or coffee, etc., and a slight repast. Hot foments to abdomen; rest; 10 drops of chlorodyne, or ammonia and ginger.

Diet.—Slops or farinaceous, egg flip.

3. Diarrhœa (Bilious). (See Bilious Attacks.) —From over-eating and drinking. Give soda and nux vomica, and a good purge, and do not stop diarrhœa. If much pain, give 10 drops of chlorodyne,

and apply hot fomentations to the belly ; later, give dilute nitric acid and nux vomica or kreat.

Diet.—Slops.

4. **Diarrhœa (Hill).** (See SPRUE, p. 103.)

5. **Diarrhœa, premonitory of Cholera** (p. 52).

6. **Diarrhœa, premonitory of Dysentery** (p. 62).

7. Occurring in various diseases, such as TYPHOID (p. 37), MEASLES (p. 33).

Diphtheria (Membranous Croup).—These are almost impossible to distinguish from one another, and any inflammation of the throat attended with the formation in it of a whitish-grey membrane must be treated as diphtheria. It is generally caused by inhaling bad smells.

Symptoms.—Sore throat and husky voice, attended with fever, prostration, and swollen glands behind the jaw, and often a metallic cough occurring in paroxysms. The air is drawn in with a noise as though it were sucked through a small tube. As the breathing becomes difficult, the face becomes dusky coloured. Exhaustion and suffocation follows. If the case ends favourably, a large quantity of thick phlegm is coughed up. The throat is seen to be covered with a thin whitish-grey coating.

During convalescence, paralysis often supervenes, but it eventually passes off.

Treatment.—Isolate. Paint the throat thoroughly

with sulphur finely powdered (flowers of, or precipitated sulphur), and made into a cream with carbolic lotion, 1 to 50 (see p. 138), several times a day. Encourage vomiting so as to detach the membrane. Sustain the strength by beef juice and brandy, if collapsed (see p. 23). Recovery will probably follow injection by "antitoxin serum," if it can be procured and used early.

Disinfection.—After infectious fevers, such as small-pox, typhus, etc., all *perishable articles* contaminated with excreta should be burned immediately, poultices, motions, vomit, stained linen, etc.

All *hard articles*, such as basins, spoons and forks, etc., should be washed, soaked in boiling water and strong carbolic lotion (or the carbolic can be put into the boiling water).

Rooms should be closed up tightly with paper, etc., pasted over cracks, and a large panful of sulphur set alight inside by a hot ember. Open after twenty-four hours, and give free ventilation and cleaning.

Motions should be mixed with strong carbolic or Jeyes' fluid, and if possible, burned; to aid this they should be mixed with wood-dust, etc. All dead bodies ought to burned.

Isolation.—In infectious diseases such as small-pox, scarlet fever, etc., a room chosen remote from all living rooms, and if possible, so that the breezes blow from other habitations towards it.

Attendant to take sole charge of the nursing, and not to go near any one but the patient, and to disinfect all articles used by the patient and self.

Dysentery. *Cause.*—Probably a micro-organism, called "amœba coli," inhabiting the bowel. It probably does not cause disease unless the vitality of the body is lowered from fatigue, chill, want of proper diet, or climatic influences, etc.

Symptoms.—Nausea and griping pains at the navel, and loose diarrhœa for a few days, are followed by profuse and very frequent stools streaked with blood and slime, and shreds like tags of washed meat.

Absence of much pain and tenderness of the belly are favourable signs. Involuntary motions, hiccough, prostration, and anxious face, are of bad omen.

Treatment.—Absolute rest in bed. Chlorodyne, 30 drops in water, or 20 grains of Dover's Powder, followed in a quarter of an hour by 30 grains of powdered ipecac. (or the tabloids) made into a bolus with water or glycerine and swallowed. If the ipecac. is not kept down, repeat it, and keep absolutely quiet, a few sips of water only being allowed. Half a grain of cocaine tabloids may be given instead of the chlorodyne or Dover's Powder.

If this treatment cannot be borne, take half a tea-spoonful of sulphate of magnesia dissolved in water, every hour, for a few days, until the stools do not smell badly. Afterwards take dilute nitric

acid and nux vomica, and be very careful not to let the appetite get the upper hand for some time, or a relapse will certainly occur.

Bœl fruit (p. 136), is useful during convalescence.

Chronic Dysentery.—Generally results from continuation of the acute form, but may be chronic from the outset. Piles (p. 93), are frequently present, and also a low form of malaria.

Treatment.—It is better to remove to a healthy climate until cured. Go through the process recommended in acute dysentery (p. 62) occasionally. Take nourishing food in small quantities often repeated, and let it be in the form of well-boiled milk, cungee and beef teas for the most part. After the morning stool, inject a solution of sulphate of copper (30 grains to half-pint of water) into the rectum whilst lying on the left side, for several days (see ENEMA, p. 141). Bœl fruit (p. 136) should be taken occasionally.

Dyspepsia. (See INDIGESTION, p. 78.)

Ear.—*Pain* may be caused by cold or inflammation. Syringe with warm water and drop in carbolic oil, holding the head over to the opposite side, so that the oil runs well down. Insert cotton wool and repeat the process every night until well.

Abscess is intensely painful, and there is much swelling. Treat as above and syringe away all matter with warm boric lotion (p. 136). Open the

bowels well, and give Dover's Powder if the pain is unbearable. Hot foments may be used, but not poultices.

Deafness is generally caused by wax in the passage. It should be syringed out with warm water and carbolic oil.

Foreign bodies, such as grass seeds, insects, beads, etc., should be syringed out. Carbolic oil kills any insect, is antiseptic and harmless, and it relieves pain.

Discharge of matter is never to be lightly treated, and must be carefully washed away with boric lotion (p. 136) twice a day and then boric acid powder well dusted into the ear-hole, which should be kept covered with clean wool or rags.

Eczema.—An irritating eruption of the skin, generally occurring at the bends of the joints, and in gouty and high-living people. May follow prickly heat. The skin is reddened, and waters in early stage, in chronic cases the skin becomes thickened, dry and scaly. There is great irritation, especially at night.

Treatment.—In the early, wet cases, use lead lotion or zinc ointment (made with lard and not vaseline) or powdered boric acid locally, and keep the part from irritation. Internally take potash of soda, and keep the bowels freely open. Diet: no salt meat, salt fish, pickles, or rich food of any kind; take plenty of fresh vegetables. In the chronic

cases use zinc ointment made with vaseline or lard, or bathe with hydrarg. perchlor. lotion, 1 in 2000 (p. 142), and take tonics, especially arsenious acid tabloids $\frac{1}{100}$ of a grain, three times a day after meals, and live very lightly as to food.

Epilepsy.—Must not be confounded with infantile convulsions produced by teething or indigestion.

Has a warning sensation or pain generally, and falls with a cry, the features and body are convulsed; the skin, at first pale, becomes purple; the tongue is often bitten; consciousness is recovered, and sleep often supervenes.

Treatment.—Loosen clothing, prevent tongue being bitten and the head bruised; lay flat on the back. In the intervals attend to diet and bowels, and give potassium bromide, 10 grains, three times a day. Alcohol is a deadly poison in these cases.

Erysipelas (St. Anthony's Fire).—Is due to a microbe multiplying in the skin and causing spreading inflammation. Is contagious, and especially attacks wounds. The affected skin becomes red, swollen, hot and burning, and the advancing margin is distinctly marked. When upon the face the features are much swollen, and there is some danger of extension to the brain. There is much fever and prostration. Abscess may form. (See p. 43.)

Treatment.—Paint the part and around it with

nitrate of silver, 3 grains, dissolved in an ounce of water, and cover with carbolic oil (the silver turns the skin black, which is awkward for the face, where the oil alone should be used). Give a smart purge, and take quinine and iron freely. If very weak, tincture of cinchona, 1 dram, and carbonate of ammonia, 3 grains, to be taken in water every four hours.

Eye.—In all cases of "wounds" or inflammation there is much pain, intolerance of light, headache, and fever. No effort must be spared to obtain skilled assistance. Meanwhile, bathe with boric acid lotion (p. 136), place a pad of soft wool over the eyelid and bandage lightly. If applying lotions, etc., to the eye, it is necessary to open the eyelids and let the fluid get underneath them.

Ophthalmia (Conjunctivitis).—Inflammation of the inside of the lids and the covering of the eyeball. There is a good deal of discharge, and the eyelids stick together. It is contagious. Bathe in warm boric lotion frequently, and smear the edges of the eyelids with vaseline. In severe cases, open the lids well and wash out or syringe out with sublimate lotion, 1 in 2000 (see p. 142), and be most careful that the other eye is not contaminated. Rest in a dark room, and keep the bowels open. It is often caused by dust. In chronic cases, dissolve 4 grains of nitrate of silver (caustic) in an ounce of boiled rain water, and, after bathing the eyes,

clean with boric lotion (p. 136); let one or two drops fall into the eye every morning.

Dust or Grit in the Eye.—Keep the eye quietly shut for a time, that the tears may accumulate and wash the dirt away. Then open the eyelids and insert cocaine solution (p. 141). When the smarting has subsided, hold the lid open. The useful method of everting the upper lid by means of a hairpin gently pressed upon it and the lashes raised by the fingers so that the lid is turned inside out, should be learned from a medical man. Gently wash the eye with a soft camel-hair brush and boric lotion, then drop in castor oil and rest the eyes.

If lime gets into the eye, wash with vinegar and water and insert cocaine drops.

Squinting.—In young children can generally be cured by using spectacles, for it is often due to defects of sight. Can be rectified by operation if not left until too late. The child should be made to use both eyes equally by covering the eyes alternately for half an hour or so every day. If one eye becomes fixed, its sight is eventually impaired, and so little real benefit is derived from operation.

Blindness.—From snow glare or bright sunlight. Smoked coloured spectacles may be worn. It is said that the Alpine plan of blackening the sides of the nose and cheek bones mitigates the effects.

Intense irritation and inflammation, and afterwards shingles (herpes, p. 75), often follow.

Treatment.—Keep in the dark and bathe with cold boric lotion, open the bowels well, and take bromide of potass., 10 grains, in water every four hours. Cocaine tabloids, dissolved in a few drops of water and dropped into the eyes, give great relief.

Fainting.—When from loss of blood, do not try to revive, or probably the bleeding will recommence.

To prevent ordinary fainting.—Bend the head down between the knees, and flick cold water in the face.

To revive.—Lay the patient flat on the back, with the head low, flick the face and hands with cold water, and apply smelling-salts, ammonia, etc., to the nostrils. Afterwards give carbonate of ammonia (p. 136) or sal volatile. Allow quiet rest and sleep.

Feet (Blistered, Sore from Marching, Bad Smelling).—Wash gently in hot water with soap. Dry, and powder thoroughly with boric acid. To harden, soak in alum water (made by dissolving half a tea-spoonful in a pint of water).

For those with tender feet, and especially those liable to stinking perspiration, the following procedure is recommended :—

Bathe the feet regularly night and morning (after washing) in carbolic acid solution, 1 in 80 (see p. 138), or hydrarg. perchlor. solution, 1 in 2000 (p. 142).

Be careful to use clean socks or bandages, and to dust them with boric acid. It is a comfortable and very efficacious plan to soak a clean pair of socks in boric acid, half an ounce (about 3 or 4 tea-spoonfuls) dissolved in a pint of water, and then let them dry in the sun. The boric acid is deposited in fine particles, and keeps the sock sweet, and also makes it smooth and very comfortable for marching. Several socks should be treated at the same time and kept for use.

Filaria.—Is a minute parasite which lives and breeds in the blood of the affected person. It reaches the body through the medium of drinking-water, and is conveyed again to water in the blood sucked by mosquitoes. Wells and water should therefore be covered, so that mosquitoes should not be able to drop into them.

Symptoms.—Elephantiasis, a disease characterized by great thickening of the lower limbs and private parts, swelling in the groin; the urine is often thick like milk. The general health gradually deteriorates.

Treatment.—There is no medicinal remedy known. Prevention by drinking only filtered water.

Filters. (See WATER, p. 15.)

Fissure of Anus.—Is a small crack in the wall of the anus; there is generally a small pile connected with it.

Symptoms.—Very great pain and smarting on passage of a motion.

Treatment.—As for piles, a surgical operation is generally needed.

Fistula of Anus.—A small painful track like a tube, about the margin of anus, caused by abscess.

Symptoms.—Same as those of fissure.

Treatment.—Same as for piles. Nearly always requires operation. Iron and quinine tonics.

Frost Bite.—The extremities become numb, shrunken and cold, and, if neglected, may mortify. The nose and ears are especially liable.

Treatment.—Restore circulation by gentle rubbing with the hand or snow. Do not apply warmth, and do not give alcohol nor bring the patient into a warm room till the circulation is restored. Afterwards smear with carbolic oil, or keep well powdered with boric acid, for the vitality of the part is lowered and inflammation may easily occur.

Gall-stones.—Are more common in stout people and in women after middle life, and are frequently associated with habitual constipation (p. 54). Formed in the gall bladder, they do not generally cause any illness until they pass into the bowel, when they cause great pain and distress.

Symptoms.—Dull pain and tenderness in front of the liver, with sickness, shivering, and some fever. Sometimes a sudden severe pain shooting and stabbing just below the edge of ribs in front,

tending towards the right blade-bone and the navel. The attack often occurs after a full meal, and patient is very collapsed; jaundice frequently occurs. The attacks are often of short duration, but distressing whilst they last. If large, may cause obstruction in the gut, with collicky pains in the belly and collapse.

Treatment.—Hot foments over liver or hot bath. Twenty drops of chlorodyne or 10 grains Dover's Powder. Copious draughts of hot water ease the strain of vomiting. During the intervals of the attacks all sedentary habits must be given up and open-air exercise taken. Diet should be plain and sparse. Alcohol is injurious. An aperient mineral water or sulphate of magnesia or soda, half an ounce dissolved in water, should be taken early in the morning daily, and bicarbonate of soda, 10 grains, with tincture nux vomica, 3 drops, three times a day. Incessant attacks can sometimes be relieved by a surgical operation.

Gonorrhœa (Clap).—Three to five days after exposure to infection, irritation of the passage and a thin discharge. In a few days scalding occurs on passing water, and the discharge becomes thick and copious. The glands in the groin swell and are tender, and there is often a painful erection (chordee) at night. In favourable cases it abates in three weeks. Bubo (p. 51) may form, or the inflammation may extend to the bladder. Gonorrhœal

rheumatism (p. 99) may occur towards the end of the attack.

Treatment.—After exposure to infection, syringe night and morning with weak Condy's Fluid, and if any discharge appears, double the strength. Keep the bowels freely open, do not ride, and avoid exercise of all kinds. Total abstinence from all alcohol promotes a rapid cure. Warm baths are advisable. Chordee may be alleviated by potassium bromide, 30 grains, in water at bed time, or half a grain of cocaine may be added to the injection. Bicarbonate of potash or soda, 10 grains, should be taken three times a day, with copious draughts of barley water, lemonade, or imperial drink. At end of first week sandal-wood oil capsules may be taken three times a day with the potash. If there is much weakness, take quinine and iron tonic.

Gout.—Due to excess of uric or lithic acid in the blood. Does not necessarily show itself as an attack of gout, but more frequently as lumbago, rheumatic pains, dyspepsia, anæmia, and skin eruptions. May effect the luxurious or the poor. Is often hereditary, and this is often used as an excuse for continuing the usual vices of the gouty —want of sufficient exercise and self-indulgence in errors of diet and too much alcohol. In many cases the occupation or condition precludes that amount of outdoor exercise without which the patient will always be gouty; he cannot be cured, only relieved.

for the *regime*—strict dietary, hygiene, and exercise —is felt to be worse than the disease. For such, small quantities of stimulants are necessary in order to keep up the strength and prevent the gout obtaining the upper hand. Those who are gouty soon find out for themselves what diet and drink is unsuited for them, and, generally speaking, it is wise to avoid the accessory and rich dishes such as pastry, etc., and not to take large meals. Robust people and especially athletes, who have taken to a sedentary occupation are liable to become gouty.

Treatment.—Never get constipated. An occasional course of a week's abstinence, with an evening dose of citrate of potash (one tea-spoonful dissolved in water) should be taken, and the evening "peg" omitted.

An attack of gout commencing with pain in a joint is often set up by a slight injury. Wrap the joint in a warm dry absorbent wool, cover with mackintosh, bandage lightly, and keep raised. Change the wool every day. A very hot bath with much carbonate of soda added to it often relieves. Sylicylate of soda, 20 grains, in water, and repeated in 10-grain doses every four hours, alleviates the pain and eliminates the poison. Colchicum (which is contained in most quack gout medicines) relieves the pain, but attacks seem to occur at shorter intervals with it; the dose is 10 drops of the wine in water every four hours. It is not to be taken if there is much prostration.

Chronic Gout.—Guaiacum lozenges. Iodine of potassium, 10 grains, three times a day. Avoid much salt and drinks containing soda; take potash in preference.

Gravel.—In the urine, is shown by deposit of fine grains like cayenne pepper, and often a thick brick-red deposit when the urine has cooled. There is liability to stone in the kidney (see p. 85).

Treatment.—Same as for gout (see p. 73).

Guinea Worm.—Contracted from bathing in dirty water. Usually affects the leg. A thin cord is felt under the skin, and a blister forms, with much irritation or nettle-rash. In the blister is a fine white, hair-like body, which is the head of the worm. The body is the size of a pack thread, and may extend through the tissues for a length of two feet. The native practice is to secure the head of the worm round a stick, and wind a very small piece out every day. If it breaks, inflammation and abscess follows. Antiseptics should be carefully applied by the part being gently washed in soap and warm water and covered with lint soaked in sublimate lotion or carbolic, and kept moist by a plantain leaf or mackintosh, etc., over it. The hands ought to be carefully washed and soaked in lotion before winding. The leg should be kept at rest until the parasite is got rid of.

Gumboil. (See p. 111.)

Head Injuries. (See Insensibility, p. 80.)

Heartburn. (See INDIGESTION, p. 78.)

Herpes (Shingles).—A painful irritation and eruption from inflammation of the nerves.

Symptoms.—Great pain, often stinging in a patch of the skin, followed by inflammation and the formation of small blisters which, if not kept aseptic, often lead to troublesome ulcers. Persistent neuralgia often follows. The common site of herpes is round one side of the chest, then called "herpes zoster."

In those exposed to sun-glare there sometimes ensues intense pain over the eyebrow, followed by inflammation and blisters, the eyebrows falling out.

Treatment.—Nothing is very efficaceous in relieving the pain. The part should be bathed with "carbolic" or "soloid" lotion (p. 138) and dusted with boric acid. Full doses of bromide of potassium, 30 grains, in water, twice a day, and the bowels well opened. Perfect rest in a dark room must be enjoined. Troublesome neuralgia is likely to follow, when iodide of potassium, quinine, or arsenious acid may be taken under medical direction.

Hooping or Whooping Cough (Pertussis).—A contagious disease usually occurring in childhood, and not again during life. The sufferer must be kept from other children for ten or twelve weeks.

Symptoms.—Commences as an ordinary cough, which gradually grows more distressing, until gasping for breath occurs, and then the breath is suddenly

drawn in with a "whoop." There is generally slight bronchitis and wheezing in the chest. The attack lasts about two months, and is contagious for several weeks longer.

Treatment.—Plenty of fresh air, with avoidance of chills, and regulating the digestion. Do not keep indoors unless there is much bronchitis. If phlegm seems difficult to cough up, give ipecac. wine. (See BRONCHITIS, p. 50.)

Hydrocele.—Fluid in the bag surrounding the testicle. Comes gradually, and begins at the lower part; may swell to a large size.

Treatment.—Only by surgical operation.

Hydrophobia (Rabies).—"Every bad-tempered dog is not mad, and every person bitten does not get hydrophobia."

The dog or other animal supposed to be mad should not be killed at once, but shut up securely and watched to see whether it is really mad.

Symptoms.—May develop after the bite in from one week to two years, but is rare after four months. The wound has healed as a rule, but tingling, heat, and pain, or reopening sometimes occurs; small blisters under the tongue sometimes appear; general feeling of illness, sleeplessness, and depression; mental agitation increases: the throat becomes congested, and thick phlegm is spat out; thirst is severe, but there is dread of drinking on account of convulsions produced. Convulsions are

caused by slight causes, such as a bright light, noise, weight of bed-clothes; maniacal excitement is common, weakness increases, and death occurs. Sometimes from the first there is rapid paralysis.

Treatment.—Encourage local bleeding from the bite by placing ligature round the limb above it; apply the wound well with pure carbolic acid or a paste of potassium permanganate (p. 146) and water. Give chloral hydrate, half a dram, every six hours, or a few whiffs of chloroform, or dose heavily with morphia or opium.

Pasteur's Inoculation.—In all cases where a rabid bite is suspected, endeavour must be made to journey to Paris * immediately for inoculation (which gives the only hope of cure), until the supineness of Government, or the ignorance of well-meaning fanatics, has been educated to try and save sufferers from the agony of a terrible death by having an institute in the country.

Hysteria.—Generally in females, and is due to want of proper brain control and to the desire of attracting attention. Ideas control the body and produce unhealthy changes in it.

Deception and mimicry of real disease are often very perfect, and can only be distinguished by skilled observers. A common symptom is "a ball in the throat," or "a pain like a nail being driven

* Address of Pasteur Institute—Rue Dulot, Boulevard Vaugirard, south side of the Seine. Residence at Grand Hôtel de l'Institut Pasteur.

into the head." Kindly firmness and absence of a show of sympathy, and separation from sympathizing friends and relations will do wonders. The occasional administration of potassium bromide and tonics are useful, especially in sleeplessness. An hysterical attack or fit may be promptly stopped by the unexpected, sudden douching of the head and face with cold water.

Indigestion (Flatulence, Heartburn, Dyspepsia).—*Causes.*—Irregularities in diet; too free indulgence in spirituous or malt liquors, and especially in tea; excessive smoking; general weakness and torpidity of liver; prolonged fasting.

Acute Dyspepsia.—*Symptoms.*—Acid eructations; nausea or bitter taste in the mouth; colicky pains and windy distension of the stomach, with headache; foul tongue, and diarrhœa.

Treatment.—Empty stomach by emetic, such as 30 grains of ipecac.; finger in the throat after drinking warm water; draught of warm water with a tea-spoonful of mustard stirred up in it. Regulate diet; take slops entirely, and work back to solids through a fish or milk diet. Hot application to stomach give great relief. Empty the bowels by laxatives, especially small doses of calomel or rhubarb and soda, and soda-mint tabloids give great relief from heartburn, and, if flatulence continues, add nux vomica tabloids.

Chronic Dyspepsia.—*Symptoms.*—Want of appetite, heartburn, flatulence, constipation or diarrhœa, mental depression. Is likely to occur in those subject to acute attacks, or in those debilitated by malaria or exhausting diseases, or indiscretion in food and drink.

Treatment.—Chiefly regulation of diet; food in small quantities of easily digestible quality, and taken at regular intervals; Benger's or infant's food. Soda-mint and nux vomica tabloids or bismuth and soda tabloids after meals ease pain. Regular exercise and habits, change of scene, and cheerful society. It is well to omit cold bathing until cured, but massage is strongly recommended.

A continued diet of sterilized milk (p. 21) with barley or lime water will often succeed in even the worst cases.

Inflammation.—Whenever inflammation is severe there is always fever.

Symptoms.—Pain, heat, redness and swelling, and generally feverishness.

Treatment.—In slight cases place the part at rest (the arm in a sling, the leg raised on a chair, etc.), and apply carbolic lotion (p. 138). If there are signs of extension, and the pain becomes throbbing, abscess is threatening. (See Abscess, p. 43.) Smear with carbolic oil, and apply hot fomentations or a poultice (antiseptic) (p. 146). Do not use ordinary

poultice to a whitlow (p. 110); this has been the means of losing many fingers. Ensure free action of the bowels, and keep up the strength.

Influenza ("Russian Influenza," "La Grippe").—Very infectious; occurs in epidemics, like dengue. Attack lasts a few days, and leaves great weakness.

Symptoms.—General feeling of illness, with high fever, and great pains in the back and headache, declining as a rule on the third day, when rapid recovery takes place; but prostration is often very great. Rarely, there is a red rash.

Treatment.—Absolute quiet, rest in bed, and light diet till all the fever is gone, then most nourishing diet and quinine and iron tonics. There is great danger from chills afterwards; so do not get about too early; wear flannel round the loins.

Insensibility. — (*Examination of the insensible person.*) Note position of the body and its surroundings. Is he lying quiet, or with convulsions or twitching? Obtain all information, and meanwhile lay the patient on his back, with the head slightly raised and turned on one side (this prevents the tongue falling back and impeding respiration). If the face is pale, place the head low. Loosen all tight clothing about the neck. Open the eyes gently; touch the eyeballs, to see if they are sensitive (if they are, the eyelids will blink). Note if the pupils of the eye become smaller when exposed to light, and again larger

when covered from the light; whether the pupils are small or large, of unequal size, or whether there is squinting. Is the breathing easy, laboured, or puffing (stertorous)? Do the cheeks puff out with breathing? Does the breath smell? Examine the body, and look for wounds, bruises, swellings, etc., broken limbs, or dislocation. Compare the two sides of the body. Do the limbs, when raised, seem to fall lifelessly on one side more than on the other?

How to tell the cause and to treat it.

Shock (Collapse).—Caused by injury or sudden alarm.

Symptoms.—Pale pinched face, cold, clammy skin, feeble breathing, and imperceptible pulse. If sensible, anxious expression, mind depressed, and complaining of cold.

Treatment.—Lay out flat. Apply warmth. Rub limbs towards body. If unconscious, apply smelling-salts, etc.; but do not give anything by the mouth. If conscious, give warm fluids, coffee and tea; if no bleeding, sips of spirits and hot water, or carbonate of ammonia tabloids dissolved in water. Keep very quiet, and allow to sleep. Afterwards, nourishing diet.

Concussion. Stunning.—Due to injury of the head and shaking of the brain. May merge into Compression.

Symptoms.—If slight, giddiness and passing feelings of confusion. If severe, similar to those of shock, but vomiting usually precedes recovery.

If very severe, complete insensibility, and cannot be roused.

Treatment.—Absolute quiet in bed. Cold to the head. Calomel (powdered finely), 5 grains, on the tongue. No alcohol or stimulants allowed. Recovery may be very slow, and brain mischief, as shown by great irritability, may supervene, when bromide of potassium, 10 grains, to be given three times a day for a few days.

Compression of the Brain.—*Causes.*—Injury to the skull, producing fracture; bleeding inside the skull, and inflammation of the brain.

Symptoms.—Complete insensibility; eyeballs insensible to touch, pupils insensitive to light and unequal in size, or both widely dilated. Deep breathing, snoring, and puffing of the cheeks. Face contorted; eyes may squint; paralysis, and sometimes convulsions and twitchings.

Treatment.—If there is a wound, cut off all the hair closely, and well wash with antiseptic lotion of carbolic, soloid or boric acid lotion, and cover with a clean rag or lint soaked in the lotion. Otherwise, same as for concussion. A surgeon can possibly save life by operation.

Apoplexy. (See p. 45.)

Opium Poisoning. — *Symptoms.* — Stupor; can generally be roused. No convulsions, twitchings, nor paralysis. Pupils of the eyes are very small. Breathing becomes slower, insensibility deeper, and the skin cold and clammy.

Treatment. — Excite vomiting (fingering the throat, or administer a tea-spoonful of mustard stirred up in warm water). Give strong coffee and carbonate of ammonia and nux vomica tabloids freely, and keep the patient on the move, and do not let him drowse.

Drunkenness.—Very difficult to distinguish from apoplexy; so always give the benefit of the doubt, even though the breath smell strongly of liquor.

Treatment.—As for apoplexy, and on recovery purge well.

Epilepsy. (See p. 65).

Hysteria. (See p. 77).

Fainting (Syncope).—Due to heart failure, so that insufficient blood is applied to the brain. May be caused by fatigue, hunger, heat, weakness, fright, hæmorrhage, etc.

Symptoms.—Similar to those of slight degree of shock; may be slightly insensible.

Treatment.—If from hæmorrhage, never give stimulants, rest in horizontal position sufficient.

In slight cases, bend the head down between the knees for a few minutes, so that blood "rushes to the head." If unconscious, lay patient out flat, with head below the level of the body, and dash cold water in the face. Administer smelling salts and give carbonate of ammonia (sal volatile) when able to swallow.

Kidney Disease. — *Causc.* — Failure of the kidneys to remove refuse material from the body.

Symptoms.—Insensibility, sudden or gradual, convulsions. Breath smells of urine; often dropsy present, pupils equal in size.

Treatment.—Hot bath, mustard poultice to loins, and, most important of all, if patient can swallow, is a strong purgative, especially sulphate of soda or magnesia or jalap.

Sunstroke. (See p. 104.)—There is always high fever.

Itch (Scabies).—Caused by a parasite (*Acarus scabei*). Is contagious.

Small blisters form on the skin, generally between the fingers or on the wrist, and discharge watery matter. Afterwards there is great itching, with inflammation, and frequently eczema. The insect burrows underneath the skin, and the track looks like a scratch.

Treatment.—Scrub with hot water and soap, then rub into the part sulphur ointment or carbolic oil, or paint with tincture of iodine. If there is much inflammation, apply carbolic lotion or Goulard water until the irritation subsides.

Dhobee Itch. (See Ringworm, p. 99.)

Jaundice.—Shown by yellow colour of the skin and whites of the eyes. Is not a disease, only a symptom common to many diseases. It is caused by bile in the blood, and occurs in obstruction to the flow of bile from the liver, such as occurs in

constipation, tumours of the belly, gallstones, in most acute fevers, also poisoning, severe fright, or concussion of the brain. (See LIVER, p. 86.)

Slight jaundice appearing slowly often indicates serious disorder.

Treatment.—Treat the cause. Purgatives usually required.

Kidney Colic (Renal Colic).—Most sickening and prostrating pain in the loin, running round to the lower part of the belly, with cold sweats and collapse. Caused by a stone passing from the kidney to the bladder.

Treatment.—Hot fomentations to the loin and belly; opium or Dover's Powder, or chlorodyne with hot brandy and water.

Labour (Confinement).—May be expected 280 days from last monthly period. It is wise to carry a good enema syringe and, a few days before the expected labour, to syringe the passage with potassium permanganate solution (p. 146). Do not allow the nurse to wash the parts with an ordinary sponge, but always use fresh clean lint or cotton wool and well-boiled water, afterwards applying carbolic lotion, so avoiding contamination and fever. For the conduct of labour larger works must be consulted, and on no account should labour be allowed to take place without skilled assistance being at hand. Always have plenty of boiling water at hand. The bowels previously to be freely opened.

Liver, Congestion of.—Life in the tropics predisposes to liver complaints, which may be long resisted by temperate living, but sedentary habits and irregularities of eating and drinking are conducive. A chill when the body is heated is likely to result in inflammation. It also follows continued exposure to malaria.

Symptoms.—A sense of oppression and fulness in the right side along the borders of the lower ribs, a furred tongue, sickness, light-coloured motions, or perhaps jaundice. When of long standing the patient becomes pale and sallow, and is very sensitive to changes of temperature. Depression and irritability of spirits. There is always indigestion.

Treatment.—An acute attack is usually cured by rest and spare diet, without alcohol. One dose of 5 grains of calomel or a compound colocyth pill (p. 141) every night and, if needed, aperient mineral waters before breakfast for a few days. Afterwards take dilute nitric acid, 10 drops, mixed with half a wine-glassful of infusion of chiretta (p. 140) (Kreat Halviva), three times a day, or nux vomica tabloids. For chronic cases, only change of climate will be of permanent use. Chloride of ammonium, 15 grains, dissolved in water, and taken three times a day, helps.

Liver, Inflammation of.—*Cause.*—Same as that of congestion, which may run into inflammation. Most

common in men between twenty-five and thirty-five. Frequently occurs with dysentery.

Symptoms.—Similar to those of congestion, but more severe, and generally attended with fever. If the upper surface is attacked, may be mistaken for pleurisy or inflammation of the lung. Will lie on his right side. The urine is high coloured and scanty.

There is always danger of abscess occurring or of a chronic state supervening.

Treatment.—If there is no dysentery, give 4 grains calomel, followed by salines in the early morning (see CONGESTION), etc. If there is dysentery, give castor oil, and treat the dysentery (p. 62). A mustard poultice or leaf applied over the liver gives great relief, and should be repeated.

Omit the cold bath.

Liver, Chronic Inflammation.—Often occurs after frequent attacks or continued congestion. Discharge of blood from stomach, nose, or rectum sometimes occurs, and piles. *Treatment.*—Keep the bowels open, and remove to cool climate.

In all liver troubles sudden changes of temperature are not well borne, so it is better to omit the cold bath, or at least to have the water warmed.

Lockjaw. (See TETANUS, p. 106.)

Lumbago. (See p. 111.)

Menstruation (monthly periods). — Should be regularly expected every month, and usually lasts

five days; there should be no clots passed. Usually appears earlier in the tropics, and is more profuse. In anæmia, it is usually scanty, but is sometimes profuse. It usually ceases during any severe illness. Exposure to cold or fatigue during a period is likely to result in suppression or inflammation, when hot foot baths and hot fomentations to the abdomen should be used. Temporary cessation in anæmic girls need cause no anxiety, it will return when the health improves.

Profuse discharge, with paleness, languor, and aching pains in the back (diffuse discharge is difficult to distinguish from miscarriage). Rest in the horizontal position must be insisted upon, and stimulants avoided; two grains of quinine every four hours and the bowels freely opened. In severe cases, ergotin tabloids every four hours. In the plethoric or full bodied give low diet and purgatives, with quinine. If there are nervous symptoms or hysteria give bromide of potassium, 10 grains, in water every four hours.

A frequent cause of trouble is the practice inexperienced travellers have of too quickly adopting cool clothing. Woollen clothing should always be worn in some form or other next to the skin. Beware of sunset chills, and of resting after exertion without a shawl at hand.

Miscarriage (to prevent).—Keep healthy, regular life, the bowels free (see CONSTIPATION, p. 54),

and take only digestible, simple food. No violent exercise. In the weakly, iron tonics and quinine, in small doses only, and a little wine. Especially rest during the period the courses would have appeared.

When threatening, as shown by labour pains and discharge of blood, lie down in cool room and take 30 drops of chlorodyne in water. If the pains continue, and bleeding occurs, miscarriage will certainly take place.

When it has happened, as shown by profuse bleeding, this will not cease until the entire mass is expelled.

Treatment of cases in which continued pains and bleeding occurs.—Take ergotine tabloids three at once, and then one three times a day for a week. Wash out the passage by means of a syringe with antiseptic lotion, the best being sublimate (p. 142) or tincture of iodine, twice a day at least. Take care that the syringe is filled well before inserting the tube, and that the end is kept under the surface of the water, so that air is not sucked in. Never allow the private parts to be washed with an ordinary sponge and soap and water; this is causing blood poisoning. Use clean wool or lint and antiseptic lotion. Must not rise and walk for at least a week after all bleeding and discharge has ceased. No alcohol to be allowed, as it encourages bleeding.

Monthly Periods. (See MENSTRUATION, p. 87.)

Moon Struck.—No harm ever results from exposure to the light of the moon; the harm is caused by the cold night air, and the lowering of vitality which occurs during sleep, rendering the system liable to cold, rheumatism, malaria, inflammation of the bladder, etc.

Mumps (Parotitis).—Is an infectious complaint, The glands behind the jaw become much swollen and inflamed, continuing painful and hard for nearly a week. There is generally a good deal of inflammation and fever. The testicles or ovaries sometimes become inflamed during the disease, but there is no need for alarm if rest is taken.

Treatment.—Hot fomentations, low diet for a few days, and the bowels kept freely open are all that is needed. Afterwards give tonics.

Nettle Rash (Urticaria).—White raised wheals, accompanied by irritation, as though stung by nettles. Appears suddenly, lasts a variable time, vanishes quickly, frequently recurring the next day. Generally follows error of diet, such as shellfish, cucumber, drinking cold water when the body is heated, or the stings of insects.

Treatment.—Aperients or emetic, then soda bicarbonate or soda mint tabloids. Bathe with carbolic lotion (p. 138).

Neuralgia is commonly malarial, especially in the form of "Tic-doloureux," which is an agonizing pain over the eyes. Decayed teeth are a very

frequent cause of neuralgia. It is also a general sequel of shingles (herpes, p. 75), and is usual with anæmia and constipation.

Treatment.—The general health and any bad teeth must be rectified. Quinine, 5 or 10 grains, generally gives relief. Antipyrin, 5 grains, or a similar amount of Antifebrin is most useful, but great care should be taken not to overdose. Hot flannels, or the very useful little Japanese "habamhi," which is a small flat metal box, slightly curved and filled with smouldering charcoal, may be applied

Nipples. (See BREAST, p. 49.)—With deep cracks or very irritable nipples, better wean. Carefully wash in boiled water, and apply carbolic lotion or carbolic oil (p. 138); if sunken, use a nipple shield, which must be scalded before and after use. If tender, use carbolic oil and an occasional lotion of alum (half a tea-spoonful to water half a pint), washing the nipple before suckling. Support the breasts if they are large.

Nose Bleeding. (See HÆMORRHAGE, p. 127.)—Generally ceases when the patient lies down flat on the back. Apply cold water to face and back of neck and the head, and keep quite still. A pinch of powdered alum dissolved in a wine-glassful of water, may be snuffed up the nostrils. It is common in anæmia and with congested liver.

Opium Poisoning.—*Symptoms.*—Peculiar smell of breath; pupils of the eyes contracted on both sides;

can generally be roused by speaking roughly. The symptoms come on very gradually. There is no paralysis nor puffing breathing.

Treatment. — Rouse up, and do not allow to slumber; administer quantities of very strong coffee, and give nux vomica tabloids freely. Emetic, if large dose recently swallowed.

Palpitation.—In the majority of cases is not a serious symptom, and is caused by indigestion, flatulence, or tobacco or tea. It is a very common symptom in anæmia, hysteria, and disturbances of the monthly periods. Palpitations from *heart disease* comes on gradually as a rule, and is continuous, although more marked at one time than another; there is often pain over the left side of the chest, and the lips and cheeks are often florid and congested; the sounds of the heart are also altered.

Treatment. — Give a tea-spoonful of sal volatile in a glassful of water, by sips, or a little wine. Remove constipation, and forbid tobacco, strong tea, or coffee.

Phthisis. (See CONSUMPTION, p. 56.)

Piles (Hæmorrhoids). — Are enlarged veins of the rectum, and are of two kinds—"**external**" and "**internal or bleeding piles.**"

External Piles.—*Symptoms.* — Usually give no trouble, unless inflamed. There is often irritation about the fundament, and projection of soft masses,

like grapes, which may bleed after a motion. When inflamed, there is great pain, irritation, and weight in the part, also fever and feeling of illness.

Internal Piles.—The motions are streaked with blood, and there may be free bleeding without any motion, or after one. Unless constipated, the motions cause no pain. If there is much loss of blood, the patient soon becomes weak and anæmic. In slightly stout, full-bodied people, slight loss of blood is beneficial. There is often straining at stool, and frequent desire to pass water, with pains in the loins. They may ulcerate and cause symptoms like those of dysentery. They are often associated with fissure (p. 69). Both internal and external piles may exist together.

Treatment.—When not inflamed, use ointment of opium and galls (p. 142), or hazeline, ointment or cold water injected into the rectum every morning. When inflamed, open the bowels well, and apply carbolic oil thoroughly, and use hot fomentations or poultices (antiseptic, p. 146).

If the piles protrude after a stool, they should be carefully replaced with the finger, anointed with carbolic oil. The closet should be used at night instead of the morning, so that the bowels should be rested afterwards. Excessive bleeding should be stopped by injections of cold water with hazeline or alum (one tea-spoonful to the half-pint). The bowels should be kept lax, and the food chosen so

as to avoid any irritable substances, such as seeds, pips, bran, etc.

Hazeline, one table-spoonful three times a day, in water, is useful, and if there is anæmia, iron must be taken. The ointment of galls and opium (p. 142), applied night and morning, reduces the size and gives much relief.

Plague (Pestis Major).—An acute fever with inflammation of all the glands of the body, extreme exhaustion, and delirium. Is caused by a micro-organism.

Infection and Contagion.—Chiefly by dust from infected dwellings, or prolonged and intimate contact with the plague-stricken. Also probably by rats and other animals. It does not spread where the sanitary conditions are good.

Symptoms.—Appear from three to six days after exposure to infection. The onset is very rapid. Fever, delirium, and great prostration. The glands in the groins, armpits, and neck rapidly enlarge and become painful, and often form abcesses. The tongue and breath are foul, and the complexion bilious.

Treatment.—Europeans do not succumb so easily as natives.*

Disinfection (p. 61) must be thorough, and nursing attendance assiduous. The dejecta must be burned.

* *The preventive and curative treatment of plague by the injection of the serum of immunized animals, promises to be a great success.*

On no account allow patient to get out of bed, or sudden death may occur.

Purge freely at first by calomel, 5 grains, or salts. Give brandy or whisky and water freely. Iced beer or stout (Lowson) is well borne. Beef tea (p. 22), milk, soup, or mutton broth freely. Congee water or imperial drink (p. 22) is grateful, for the thirst is great.

For the delirium, apply cold to the head. If there is great pain, give Dover's Powder, 10 grains.

For attacks of faintness, use smelling-salts and ammonia freely.

Two tabloids of carbonate of ammonia, two tabloids of nux vomica, two grains of quinine, should be taken every three or four hours.

The nux vomica tabloids are most valuable in keeping up the strength, and should always be taken until the stimulation is felt.

When convalescing, give iron (p. 143) and arsenious acid tabloids.

(Pestis Minor.)—A less acute form of the disease. Is very chronic, and is common in the far East.

Symptoms.—The glands in the groins slowly swell, and there is general weakness, pallor, and fever. In about three weeks or less an abscess forms. There is no accompanying venereal disease.

Treatment.—A surgeon would cut the glands early. Cover the glands with carbolic oil (p. 138). and apply hot fomentations or poultices (p. 146), and

then treat the abscess (p. 43). Ensure good action of the bowels. Let diet be most nutritious. Stimulants are indicated.

Give quinine and iron (p. 143), with or without nux vomica and arsenious acid.

The patient should be isolated.

Pleurisy.—Inflammation of the covering of the lungs.

Symptoms.—Sharp, stabbing pain in the side of the chest, felt upon drawing the breath or coughing, and fever.

Treatment.—Rest in bed, hot fomentations, a binder round the chest, to ease the pain of breathing. Antimonial wine (p. 135), 5 drops, every two hours, with a dose of 10 grains of Dover's Powder. Leeches are useful, applied over the seat of pain.

When pain is relieved, give quinine.

Pneumonia (Lung Fever).—An acute inflammation of the lung, generally on one side. Is caused by a micro-organism. Is prone to attack the alcoholic and weakly and those debilitated by exposure. In India it commonly ushers in severe typhoid fever of a rapid nature. Recurrence is very common.

Symptoms.—Generally commences with a severe chill. There is a sharp pain in the side, a short, dry, painful cough, and difficult, rapid breathing, great distress and prostration. Later, the phlegm

is thick and of a rusty colour. Delirium is common. After about a week a "crisis" occurs, the fever suddenly falls, and the patient feels comfortable. Redness of one cheek on the same side as the disease is commonly seen.

Treatment. — Uninfluenced by medicine. Is greatly benefited by alcoholic stimulation, six ounces of whisky or brandy are easily borne during the day, and "iced pegs" are advantageous. Nux vomica, 6 drops (in tabloids), every four hours. If in much pain, Dover's Powder, 10 grains, or chlorodyne, 10 or 20 drops, may safely be given. The bowels to be well opened by calomel or salts. After the crisis give quinine tonics.

Diet. Milk. Beef juice (p. 23), egg flip (p. 24). Iced soda and milk is very useful.

Prickly Heat.—Use carbolic acid in the bath, one table-spoonful to the gallon of water; dry and dust on the skin boric acid powder. Carbolic lotion (p. 138), mixed with alcohol, may be dabbed on the skin. Calcium chloride, 10 to 20 grains, dissolved in water, and taken three or four times a day, relieves intolerable itching.

Rheumatism.—Most complaints termed rheumatism are dependent upon gouty conditions, and should be treated as such. (See LUMBAGO, MUSCULAR RHEUMATISM.) Often the pains are due to malaria.

Acute Rheumatism (Rheumatic Fevre). — Is a

distinct fever, probably due to a special germ. It is most common in young people. After a few days of lassitude and pains in the joints there is fever, with white-coated tongue and scanty urine. Severe pain and inflammation of one or more joints follow, and a profuse, sour-smelling perspiration. There is a great tendency to heart affections and anæmia, followed by great weakness. The attack lasts several weeks.

Treatment.—Absolute rest in bed throughout the whole course of the disease, and most careful avoidance of cold or of fatigue for a long time afterwards, for the disease is prone to recur. Salicylate of soda, 10 grains, with bicarbonate of potash, 15 grains, dissolved in water and taken every four hours for four days a week, as long as it does not produce noises in the head. Free action of the bowels. Warmth to the affected joints. Low diet of milk and broths, and no meat.

Lemonade and limes may be freely taken, also imperial drink (p. 22). Quinine and iron tonics are indicated when the pains are better and the tongue clean.

Chronic Rheumatism (Rheumatic Gout).—Several distinct diseases are included under this term, and they are marked by pain and impairment of the usefulness of the joints. It may be a sequel of rheumatic fever, but more often occurs insidiously with old age, or after exposure to damp cold.

Treatment.—Little permanent good can be done

by any medicinal remedy. Generous living. Turkish baths, tonics, and wearing round the painful joint flannel sprinkled with flowers of sulphur. Salicylate of soda sometimes relieves the pain.

Gonorrhœal Rheumatism.—Is a blood poisoning, caused by the absorption of the gonorrhœal discharge. It occurs after the third week of gonorrhœa, with pain and swelling of a joint or sole of the foot; sometimes there is also pain about the ball of the eye. It is generally mild, but often leads to permanent stiffness of the joints affected. Rarely general blood poisoning takes place. (See Gonorrhœa, p. 71.)

Treatment.—The gonorrhœal discharge must be got rid of before a cure will take place. Quinine and iron should be given freely. The limb should be raised and the part kept at rest. The bowels freely opened.

Ringworm.*—May appear on any part of the skin. Commences as a small, scurfy, irritating pink spot, enlarging and having a line of small blisters at the margin. When inflamed it is difficult to recognize.

Treatment.—It is advisable, in districts where the disease is rife, to wear round the loins a small pair of linen drawers that can be washed at home. A fresh spot should be painted with tincture of iodine, after washing with soap and hot water. If inflamed, use carbolic lotion (p. 138) or lead lotion (p. 144).

* "Dad dadru," "majes dad," "denaii," Dhobee itch.

Sublimate lotion (p. 143) continually applied is usually effectual. The general health requires careful attention, and tonics are required. An exceedingly comfortable procedure is that of wearing linen drawers that have been saturated with boric acid solution, and then allowing them to dry, making them mildly antiseptic as well as smooth to the skin.

Rupture (Hernia).—Is a protrusion of the bowel through the abdominal walls under the skin. Caused by straining.

Symptoms.—Pain in the groins after exertion, followed by a soft, elastic swelling, which can be pushed back into the abdomen when lying down, but reappears upon coughing or straining. There is a peculiar gurgle felt as it goes back. If it will not return, it is called *irreducible.* If it is caught, and the blood supply stopped, it is called *strangulated*, and it does not bulge on coughing, when there is great depression, pain, constipation, and vomiting, followed by intense thirst, hiccough, cramps in the legs, and stoppage of the urine.

Treatment.—Always keep back the bowel with a well-fitted truss, and never allow it to come down. If it becomes "irreducible," have continuous rest in recumbent posture, with the foot of bed raised, and starvation diet. Keep up continuous pressure with a light bag of shot; apply an ice-bag, and daily try gentle manipulation with the fingers to return it. If "strangulated," take a very hot bath (but not if

patient is very old or very weak), and, whilst in it, try gently to reduce the bowel, but do not persevere longer than ten minutes. If collapse and pain are great, give chlorodyne, Dover's Powder, or opium. If it cannot be reduced, and collapse is great, the only chance of life is to make an opening through the skin down to the swollen gut. To this end put on a hot antiseptic poultice (p. 146), and encourage abscess, which open early and wash out with strong sublimate lotion (p. 142).

Needless to say, this is a condition in which there is imperative call for skilled aid, and that the advice given here is only for emergencies.

Scald. (See Burns, p. 121.)

Scurvy.—It is a blood disease, dependent upon improper diet—the lack of fresh meat, and especially of fresh vegetables, or with an indisposition to partake of them from loss of appetite. When well pronounced, there is great lassitude, palpitating, soreness of the gums, and muddy complexion. The teeth often become loose, and the gums bleed easily. Blue bruise spots appear on the skin, and diarrhœa frequently occurs, followed by death from exhaustion.

Treatment.—Freshly killed meat, or meat juice (p. 22); fresh vegetables, and plenty of salt; fresh cocoanut juice may be taken freely; milk, lemon-juice (or limes), oranges, and most fruits. For diarrhœa, Bœl fruit (p. 136). Later, iron and quinine and change of climate.

Sickness (Morning).—As a general rule, if sickness occurs soon after rising from bed in the morning, it is due to over indulgence in alcohol, and generally to tipling. May be due to liver disease (see p. 86). In women may be due to natural causes.

Treatment.—Nothing but abstinence will effect a cure.

Of Pregnancy.—Usually during the first and last three months.

Treatment.—Rest and careful habits of life, avoidance of fatigue and indigestion. If combined with sleeplessness and worry, potassium bromide (p. 145), 10 grains, occasionally. Iron tonics, especially Blaud's Pills (p. 143), and quinine in small doses are nearly always required. Keep the bowels free. (See CONSTIPATION, p. 54.)

Skin.—Peeling of the skin of the face, and irritation from sun-burn or snow-glare, may be avoided by using white-linen masks or blacking the face with charcoal or charcoal mixed with oil. Vinolia powder, fine Fuller's Earth or cimolite produces much amelioration. Lead lotion (Goulard Water) (p. 144), dabbed on is most efficacious.

Sleeplessness (Insomnia.) (See also p. 10.)

Treatment.—Look after health, and treat indigestion, anæmia, constipation, etc. Avoid tea or coffee late at night. Over-smoking is a common cause. When from mental worry, take potassium bromide,

10 grains, dissolved in water, three times a day; this acts by blunting the sensibility of the nerves, and must not be taken for more than a few days at a time, indeed no drug should be used except for a very short period for producing sleep, for they invariably perpetuate the habit and tend to progressive weakness of mind and body. Regular calm habits of mind and body, and a regular action of the bowels are necessary conditions of healthy life in the tropics. Sleeplessness often arises from exhaustion, and then the bromide or any other nerve sedative is harmful, a most nourishing diet and the moderate use of stimulants are indicated. A dose of 5 grains of quinine, or better, a tea-spoonful of simple tincture of cinchona in water just before retiring to rest, or a strong cupful of Liebig's extract of meat. A hot-water bottle or bag applied to the feet when they are cold is of great comfort, and massage is very useful.

Sulphonal tabloids, amounting to 10 or 20 grains, produce refreshing sleep, but they act slowly, and it is better to dissolve them in hot water.

Sprue, "Hill Diarrhœa," "White Diarrhœa."—A chronic affection of the lining of the guts or alimentary canal. Not confined to hill stations.

Symptoms.—Painless diarrhœa, stools light, white, copious, frothy. No griping nor other feeling of illness as a rule, flatus and bad-smelling eructations and indigestion. Tongue is smooth and light

coloured. If it continues, emaciation and feverishness occur, also dysenteric symptoms.

Treatment.—Complete cure usually results quickly from a strict diet of nothing but boiled milk (see p. 21) or boiled milk in iced water, barley water, or lime water. Later, tabloids of arsenious acid, $\frac{1}{100}$ of a grain three times a day with food, or nux vomica, should be taken. Any indiscretion of diet quickly produces a relapse. Alcohol must be completely avoided if a cure is to take place.

Stye. A small boil round the root of an eye-lash. Pluck out the hair in the centre of the swelling, and use boric acid lotion (p. 136), or very weak sublimate lotion. If matter has formed, bathe with warm boric lotion.

Suffocation.—At once remove into the fresh air and act quickly. Loosen neckclothes. Dash cold water on face and chest. To restore breathing follow rules for Drowning (p. 121). If there is choking from anything swallowed, pull it out, or turn the patient upside down and shake it out.

Sunstroke.—May take any form, from the lassitude, headache, and collapse of heat-fainting, to this condition passing into inflammation of the brain or heat apoplexy, in which the patient falls down insensible without convulsions. It is most common amongst the weakly or alcoholic.

Treatment.—Perfect quiet; rest in the horizontal position in a cool spot; cold applied to head, which

should be slightly raised, purgatives. Alcohol is to be avoided. In slight cases give bromide of potassium, 10 grains, every four hours, dissolved in water. In severe cases, shave the head, put 6 grains of calomel on the back of the tongue, and, when power of swallowing has returned, give bromide of potassium and low diet. Recurrence is likely to occur, and permanent brain mischief may result.

Teething. — *Time of appearance in children.* Central incisors, sixth or seventh month; lateral incisors, seventh to tenth month; and the molars or double or back teeth, at the end of the year. The set should be complete at the end of the third year.

A mixture of glycerine and lemon juice rubbed upon the gum relieves irritation. Is frequently attended with sickness and diarrhœa, and then a teaspoonful of castor oil or of brown sugar is needed to clear the bowl thoroughly. If there is feverishness, lance the gums over the tooth, and gently rub with boric lotion.

Eruptions and irritability will generally disappear when the bowels are healthy.

Testicle.—Inflammation (Orchitis) caused by injury, mumps, gonorrhœa, or rheumatism.

Symptoms.—Great pain and tenderness in the part, and heat, swelling, and redness. If discharge has been coming from the penis, it ceases when orchitis occurs, but returns later on.

Treatment.—Perfect rest in bed. Bowels freely

open. Raise the part on a pillow or board between thighs. Apply hot fomentations, and omit any injections. Usually becomes better at the end of the week. If in much pain, take Dover's Powder or chlorodyne. If unable to rest, sling up with a handkerchief or bandage between the legs, and in all cases keep the part raised for several weeks.

Tetanus (Lockjaw).—Caused by a microbe which has entered through a wound, and especially in wounds made by dirty articles, and contaminated by earth or stable refuse. It may occur some time after the wound has healed.

Symptoms.—Commences with stiffness of the muscles of the face, neck, and abdomen. The jaw muscles become so stiff that the mouth cannot be opened (lockjaw). Spasms occur, the whole body being affected, throwing the patient into an arched position with a hollow back, or contorted on one side or the other. The hands and feet are not attacked until late. The face is contorted into a grin ("risus sardonicus"). The pain is very great. During the intervals between the spasms, the muscles remain stiff. The patient cannot speak, but is conscious to the end, which occurs from exhaustion or paralysis of respiration. The temperature is very high, especially just before death. In acute cases death takes place in a day or two.

In less severe cases, which run a longer course and sometimes recover, the spasms are not so

marked, and the temperature does not run so high. There is a great danger if the temperature runs above 101°.

In infants **(Tentanus neonatorum, "nine days' fits").**—Commences during the first week after birth, and is due probably to want of cleanliness connected with the navel.

If the patient survives the week, then he will probably recover.

Treatment.—There is no medicinal cure known. Resource must be had to avoidance of sources of irritation, to stimulating food, and stimulants. Make a pouch of the cheek, and holding the head on one side, pour in small quantities of food at a time. Milk or egg and brandy mixture (p. 24), beef tea (p. 22). For an adult give chlorate hydrate, 15 grains, in water, twice a day. Lately some success has been obtained from injecting tetanus antitoxin.

Any wound should be opened, freely scraped, and exposed to the air (oxygen is harmful to the microbe), and washed with strong potassium permanganate solution (p. 146), and dressed with a paste of potassium permanganate crystals (146) and water, this acting as a caustic.

Tongue.—Ulcers of the tongue are often due to jagged teeth, which should be seen to. Wash the mouth with weak solution of potassium permanganate (p. 146) or boric lotion several times a day.

They should not be neglected, as they are often due to serious disease.

The state of the tongue indicates the state of the alimentary canal, and is a most useful aid to the doctor, but only a constant observance both in health and disease will teach its true significance.

General features.—Dry, brown—is usual in fever and liver complaints and constipation. Moist white—in indigestion or diarrhœa. Coated (looks as though plastered over)—biliousness. Irritable red at sides and tip—some stages of fever, especially on convalescence.

Toothache. (See also NEURALGIA, p. 90.)

Keep the teeth clean, and wash the mouth with potassium permanganate solution (p. 146) after every meal. A warning of pain should not be neglected, and it is a wise plan to have the teeth inspected regularly by a good dentist.

To ease the pain.—A crushed clove soaked in spirits of camphor, chloroform, or turpentine applied to the gum. A cocaine tabloid placed in a hollow tooth quickly relieves the pain, but should be followed up by a drop of carbolic acid, creosote, or creosote and collodion placed upon a small piece of wool. The latter are antiseptics, and subdue the inflammation. A "pepper plaster" applied to the gum gives much ease; it is made by crushing up pepper-corns, chillies, etc., and putting a pinch of them into a little piece of muslin.

Ulcer.—Is a sore produced by inflammation and destruction of a patch of skin.

Keep perfectly clean, wash with carbolic lotion (p. 138), and apply carbolic oil on lint, and bandage firmly. Rest the part as much as possible. If inflamed elevate the part and apply carbolic lotion or goulard water or hot boric acid fomentations (p. 136). Change the applications at least daily.

Chronic ulcers often occur on the leg in those who suffer from varicose veins. The whole leg must be carefully bandaged over the application. It is generally necessary to take tonics and improve the health before they will heal.

Varicose Veins.—Enlarged and tortuous veins in the leg, causing tiredness and pain in walking. Eczema and ulcers commonly follow.

Treatment.—In young people can be cured by operation. An elastic stocking or bandage should always be worn by day, and garters avoided. Wash with weak antiseptic lotion occasionally, and dust on powdered boric acid. *Eczema* (see p. 64).

Varicose ulcers should be carefully washed in antiseptic lotion (boric, soloid, or carbolic), and dusted with boric powder, the leg to be elevated and complete rest taken before they will heal.

Hæmorrhage can be restrained by pressure applied to the bleeding spot. Never rub or massage the leg, especially if there has been inflammation.

Whites.—Irritable white discharge from the private parts is very frequent with women, especially in hot climates, where the health is likely to suffer and there is anæmia and constipation. Use syringe with potassium permanganate solution (p. 146) or alum or borax, one teaspoonful dissolved in a pint of water, night and morning, changing from one to the other until the complaint is cured. The health must be carefully attended to, for the discharge will not cease until constipation is relieved.

Whitlow.—A very painful inflammation of a finger, likely to lead to abscess.

Treatment.—Never apply an ordinary poultice (p. 146), or water-dressing, or probably the finger will be ruined.

Use "antiseptic" poultice (p. 146) freely. If there is great tension of the pain, and the inflammation threatens to spread into the hand and arm, with a clean sharp knife dipped in carbolic oil, cut deeply into the pulp of the finger, and plunge the whole hand into hot water with carbolic acid four teaspoonfuls to the pint. Afterwards apply carbolic lotion, etc. (See Wounds, p. 129.)

Wind Stroke.—Is due to paralysis of the facial nerve. The face is drawn up and distorted to one side, and on the paralyzed side the face is smooth, the eye partially open, and the saliva often dribbles

from the angle of the mouth. Caused generally by sleeping in a draught.*

Treatment.—Warm fomentations to the paralyzed side, and nux vomica tabloids; generally recovers completely.

Worms (Thread-worms, Maw-worms).—Open the bowels well, and inject into the rectum in the morning a solution of one tea-spoonful of salt in half a pint of water, or quinine dissolved in water (p. 147). Santonine two grains, mixed with sugar, is very efficacious, taken upon an empty stomach and followed by a dose of castor oil.

Round-worms and Tape-worms.—Starvation diet for a few days and then strong purgatives, followed by decoction of pomegranate root bark (p. 145) or oil of turpentine, one dessert-spoonful in milk or gruel, one tea-spoonful for children.

Gumboil.—A small swelling of the gums caused by inflammation of the socket of the tooth beneath. It is really a small abscess.

Treatment.—Should be lanced, and the mouth frequently washed with weak Condy's Fluid (p. 146), boric lotion (p. 136), or carbolic (p. 138).

Lumbago.—Severe pain in the muscles of the back, aggravated by stooping or rising from a seat.

* Paralysis of the face is common in old people from a slight apoplexy ("stroke").

Is a muscular rheumatism, and really a manifestation of gout (see p. 72).

Treatment.—Rub the part well, and apply flannels wrung out in very hot water and sprinkled with turpentine. A hot flat iron passed over the back covered with flannel is most efficacious. Take half a drachm of sweet spirits of nitre in half a tumblerful of hot water every four hours, and add to each dose ten grains of salicylate of soda. If pain is severe, ten grains of Dover's Powder.

Open the bowels freely, and let diet be sparse.

CHAPTER V.

ACCIDENTS: WOUNDS, FRACTURES, DISLOCATION, BLEEDING, BED SORES, DROWNING.

№2.

Bandaging the Eye.

№1.

Bandaging the Foot,

1. *Fixing.* 2. *Reversing.* 3. *Figure of Eight.* 4. *Complete.*

№3.

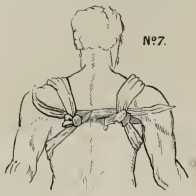
Triangular Bandage for Head. "French Headdress"... the ends being tied round, & the free corner pinned over the Head.

№5.

Triangular handkerchief, supporting the Elbow. The corner of handkerchief is afterwards pinned across to X...

№6.

Triangular Handkerchief, Supporting the Forearm.



№7.

Fractured Clavicle, (Collar Bone.) Treatment by Knotted Handkerchief... The third handkerchief being knotted round the other two, so as to pull back the Shoulders...

№4.

Bandaging the Groin.

№8.

Fracture of Clavicle, (Collar Bone)

Padded handkerchief in Arm-pit. *Arm completely bandaged.*

№9.

Dressing the Thigh with a Handkerchief...

№10.

Steadying the Lower Limbs.

№11.

Leg with Straight Side Splints applied The leg being padded inside the Splints...

TO FACE PAGE 115.

CHAPTER V.

ACCIDENTS: WOUNDS, FRACTURES, DISLOCATION, BLEEDING, BED SORES, DROWNING.

Carrying the Sick and Injured—

To carry single-handed an unconscious person, who has no broken bones.—Turn patient on his face, with arms extended in a line with the body. Raise the trunk into a kneeling position. Place yourself under him so that his stomach rests on your right shoulder. Pass your arm between his thighs, and behind his right thigh. With your left arm draw his left hand forward under your left, and grasp the wrist with your right hand; then raise yourself to an erect position.

With two helpers.—Let each bearer grasp his left wrist with the right hand, and then with the left hand grasp the right wrist of his comrade. "Sedan chair." The bearers stoop down behind the patient, who sits up on the hands, and passes an arm round the neck of each bearer.

In all serious injuries and illness, patient must be carried in the lying-down position, by means of

stretchers, such as a hurdle, gate, door, plank, covered with any soft substance. Two coats with the sleeves turned inside out, pass two poles through the sleeves, button the coats over them. Let the bearers walk "out of step" with short paces, and see that patient is comfortable.

Dislocation.—Occurs when a bone is put out of joint. They must be carefully distinguished from fractures (see p. 123). In examining the patient, always have him stripped, and then compare the two sides of the body.

Symptoms.—

1. Loss of power in the limb.
2. Alteration of the shape, comparing both sides of the body.
3. Pain and swelling.
4. The trouble is at a joint.
5. The limb is fixed and the patient cannot move it.
6. There is no crepitus (grating of broken ends of bones) felt.

Rarely there is a fracture combined with the dislocation, and then the grating of the bone (crepitus) is felt. It must be treated as a fracture, and no attempt made at reduction except by the surgeon.

Principles of Treatment.—Try to get the joint back as soon as possible whilst the muscles of the patient are weak. Pull on the limb, and at the same time twist the limb inwards and outwards and

rotate it about, when it will often go back into the joint with a snap. Afterwards give complete rest, the arm in a sling, the leg at rest in bed. Foment the part night and morning with very hot water. When the tenderness and pain are diminished, and there is no inflammation nor heat in the part, rub and knead it, and gently move the limb to prevent stiffness. Very hot douches, followed, whilst the part is red, by very cold douches, should be used continually for several months afterwards. Care must be taken not to use the limb forcibly for many months, or the bone may again slip out of the socket.

Dislocation of the Ankle.—Generally occurs with fracture of the lower part of the small bone on the outside of one leg, the foot is displaced outwards as a rule.

Treatment.—Steadily pull the foot straight and bend it into same position as the sound limb. Keep it in position by a bandage binding it to a straight splint applied to the inner side of the leg and foot, the splint should be well padded, especially just about the ankle-joint.

Dislocation of the Thigh.—The leg is usually drawn a little upwards and on to the sound limb, the toe pointed to the top of the other foot, but it may become fixed in many other positions.

Treatment.—Pull heavily and steadily upon the leg, putting the sole of your foot (with the boot

off) in the patient's crutch, and then bend the thigh upon the belly and roll and twist it outwards so that the foot of the injured limb curves over to to the sound limb. Repeat this manœuvre, if necessary.

Dislocation of the Elbow.—(Compare with other elbow.) There is a large projection behind the elbow-joint. The arm is bent, and cannot be straightened.

Treatment.—Bend the forearm at the elbow, and, grasping the arm just above the elbow, pull forcibly with the other hand, or put your knee against the arm just above the elbow and pull the arm, at the same time bending it at the elbow.

Dislocation of the Shoulder.—Compare both sides of the body. Flattening of the shoulder. Often numbness of the fingers and a lump to be felt in the armpit. The elbow sticks out.

Treatment.—Let the patient lie flat on his back. Take your boot off, and press your heel firmly into the armpit, press outwards and pull steadily upon the arm. Keep arm in sling (see illustration No. 5).

Dislocation of the Jaw.—May be caused by a blow during yawning or, in some people, by simply opening the mouth too wide.

Signs.—The mouth remains open and fixed.

Treatment.—Put the patient on a low seat, with head against wall. Wrap handkerchief or bandage

round the thumbs, and press them firmly downwards on the gums behind the back teeth of the lower jaws. At the same time raise the chin with the fingers.

Bed Sores.—Due to irritation and pressure upon feebly nourished or prominent bony parts, such as the shoulder blades, lower part of back between buttocks, over the head of the hip bone, and the heels. May also form under splints. Especially liable to form in apoplexy or brain or spinal mischief.

Treatment.—Avoid by carefully arranging the clothes, so that one point is not more pressed upon than another. Turn patient over occasionally. Avoid wrinkles in bed clothes. Keep bed dry. If the part looks red or irritable, wash twice a day with warm water and soap, thoroughly dry, and then rub gently with brandy or whisky and water. If possible, cover the part and the bed clothes underneath with boric acid powder, or boric acid and starch mixed.

When once formed, treat as a wound, bathing with carbolic or sublimate lotion, and covering with carbolic oil. Make cotton wool ring round the part, so that the sore itself is not pressed up.

Bites.—From mad animals. (See HYDROPHOBIA.)

Snake-Bite (poisonous).—Immediately tie a tight band a few inches above the bite, between it and the trunk, to prevent the poison getting into the circulation. Cut and score the part freely with a

knife, and encourage bleeding by immersing in warm water, then rub in hard any of the following which may be at hand. Potassium permanganate crystals (p. 146) made into a paste with water, chloride of lime in a watery paste, strong ammonia, carbolic acid, and, before loosing the ligature, make a clean cut in the skin, or in a distended vein just below it, and encourage some free bleeding. Take internally nux vomica tabloids, up to 30 drops every hour or two; also sal volatile or carbonate of ammonia and alcohol. Afterwards treat the wound (p. 129), raise the limb, and supply nourishment freely. The ligature is to be removed after the bite and bleeding have been attended to.

The prospect of cure after snake-bite may be expected to be much greater, owing to recent investigations as to the curative power of injected serums prepared from immunized animals.

Stings.—(Of insects, scorpions, etc.). Extract sting by pressing watch-key over it. Encourage bleeding. Rub in ammonia, or potash, or soda, and potassium permanganate solution (p. 146), or apply carbolic lotion (p. 138). If any inflammation, apply antiseptic poultice.

Bruises.—Wash the part in carbolic or soloid lotion, and then put on cold applications, and rest. When tenderness is less, massage gently. Do not use arnica, as it is apt to cause troublesome eczema. If the forehead is bruised, bind a scarf or bandage

tightly round the head over the bruise, to prevent swelling and a black eye, if the eye becomes irritable bathe it in boric acid lotion or very dilute hydrarg.-perchlor. lotion (p. 142), and wear a light shade or bandage.

Burns and Scalds.

Treatment.—If the clothing sticks to the part, saturate it with carbolic oil, and leave it until it loosens. Snip the blisters with clean scissors. Use any unirritating application that will keep out the air. Good applications are carron oil,* or carbolic oil and linseed oil, equal parts. If there is much inflammation and discharge, soak the part in warm carbolic lotion (p. 138) in a bath, taking care not to let the water get cold. Avoid exposure to the air. Give most nourishing diet, and attend to the bowels. Flour, oil, butter, chalk, bran, etc., are useful applications, but the above-mentioned remedies are to be preferred. If there is much discharge, powder freely with boric acid.

Drowning.—To restore animation.

Clear the air passages. Lay the patient upon his stomach, so that the head is lower than his body, wipe the mouth and nostrils, and put the arm under forehead. This allows the water to drain out and the tongue to fall forward, and leaves the windpipe free. Meanwhile, quickly remove wet clothes, and wrap in blankets, or place in the sun (taking care of the head).

* Equal parts of linseed oil and lime water shaken up together.

Adjust the position.—After a few minutes, turn the patient on to his back upon a flat surface, inclined a little upwards from the feet. Place a small firm cushion or roll of clothes beneath the shoulders.

Maintain free entrance of air into the windpipe.—Open the mouth, draw forward the tongue, and keep it projecting beyond the mouth by a piece of tape or elastic band passed round under the jaw.

Imitate the movements of breathing.

1. *To draw air into lungs.*—Stand or kneel at patient's head. Grasp the arms just below the elbows, draw them gently and steadily up to the sides of the head and keep them stretched so for two seconds.

2. *To press air out of the lungs.*—Carry the arms to the sides of the chest and press them gently and firmly against the sides of the chest for a few seconds. Repeat these movements perseveringly for about fifteen times a minute, until natural breathing begins, when they must be stopped. Do not hurry; if sick, turn upon the side. Meanwhile, the nostrils may be irritated by ammonia, smelling-salts, etc. Rub the limbs upwards towards the trunk, and keep the body warm. When power of swallowing has returned, give a little warm water, then small quantities of hot brandy and water or coffee, and especially strong Liebig's Extract made with hot water (p. 23). Encourage sleep. If breathing is difficult, apply hot fomentations or mustard poultices to chest.

Fracture. *Symptoms.*—Loss of power in the part; alteration in shape compared with the sound side; bending or shortening. Pain and perhaps swelling or unusual mobility at the seat of fracture. Grating (crepitus) of the ends of the bone, felt when the injured part is gently moved. A *simple fracture* has the skin unbroken. A *compound fracture* has the skin broken and a wound leading to the site of fracture.

Green-stick Fracture.—In children, whose bones are soft and bend when adult's bones would break; there is no grating.

Treatment.—Straighten and put on splints, etc.

General principles of Treatment.—Attend to the fracture on the spot. If it is necessary to move a broken limb, place both hands underneath, one hand higher up than the fracture and one lower down, and hold it steadily and firmly. Cut clothing up the seams. Gently pull and manipulate the limb until, if possible, it is the same as the uninjured side. Support the limb immovably in this position by means of splints and bandages.

Splints.—Can be made of thin board, laths, cigar-box wood, cardboard, sticks, rolls of newspaper, etc. Place soft padding evenly between splint and limb, such as cotton wool, handkerchief, etc. Bandages may be made of anything that will tie round the splints, keeping them in place without hurting the skin. If much swelling occurs, loosen the bandages. If the skin is broken, wash well with antiseptic

lotions (pp. 138, 142), and cover with wool soaked in carbolic oil.

Compound Fracture.—The skin being broken, it must be treated as a wound (p. 129). Any piece of bone sticking out must be saturated with strong sublimate or carbolic lotion (pp. 138, 142), before it is replaced. All dirt to be carefully removed. In all accidents, see that the urine is passed, if not passed in a few hours, draw it off with a catheter (p. 139).

SPECIAL FRACTURES.

Skull.—*Signs* not always obvious. There may be bleeding from the ear, nose, or mouth, or a watery discharge from the ear. Insensibility, with symptoms of concussion or compression (see p. 81).

Treatment.—Keep lying down in cool dark room, with the head slightly raised. Attend to any wound. Cool the head with ice, or cold water, or fan. No stimulants. See that the bowels are well open.

Spine. *Signs.*—Pain and shock, loss of movement in the limbs below the injury.

Treatment.—Move very carefully. Lay flat on back. Draw off the urine night and morning, oftener, if required. (See CATHETER, p. 139.) Bed sores are likely to form.

Ribs. *Signs.*—Sharp catching pain on breathing, increased by drawing a deep breath or coughing.

Treatment.—Confine the chest by a bandage or

towel, or a scarf, and keep quiet in bed. If there is blood-spitting give chlorodyne or opiate. Union in about three weeks.

Lower Jaw. *Signs.*—It is usually compound, with a tear through the gums between the teeth, but union takes place very readily.

Treatment.—Remove any loose teeth. Wash the mouth with potassium permanganate solution (p. 146) or boric lotion, etc., several times a day. Take a piece of bandage about two feet long, split each end so as to leave about three inches unsplit in the centre. Place the unsplit part of the bandage over the point of the chin, and tie the two opposite upper ends round the neck and the two lower opposite ends over the head. Feed with liquid diet.

Collar Bone. *Signs.*—The shoulder drops. The elbow is supported by the other hand. Compare both sides carefully.

Treatment.—Place soft pad under the armpit, and bandage the elbow to the side, raising the shoulder to the level of the opposite one. Put on a large arm-sling to support the elbow. Bind the arm firmly to the side just above the elbow (see illustration No. 8). Another good method is to use knotted handkerchiefs (see illustration No. 7).

Arm Bone (above the elbow). *Treatment.*—Use a splint bent to a right angle, and large enough to reach from the armpit to the elbow, and from the elbow to the end of the hand. Apply it to the

inside of the arm and the palm of hand, then put on the shorter splints, one in front and one to the outer and back part of the fractured part. Support the forearm in a sling. Unites in about four weeks.

Forearm (below the elbow). *Treatment.*—Bend the elbow to a right angle, and let the thumb point upwards. Place one flat splint on the inside of the forearm and another on the outside, reaching from the elbow to roots of the fingers. Bandage and use a large arm-sling (see illustration No. 6). Rub the arm gently when the splints are readjusted, and encourage movements of the fingers and thumbs or they will become stiff. Repair takes place in a month.

Thigh. *Treatment.*—Apply a long splint from armpit to the ankle, another splint from the crutch on the inside to the knee. Extend the leg to its natural length as far as possible. Fix with bandage: (1) around the chest; (2) waist; (3) thigh, above fracture; (4) thigh, below fracture; (5) below the knee; (6) round the ankle. See that the heel is not pressed upon, and that it does not even rest upon the clothes, or a sore will easily form. Must be in bed for six weeks, and not use foot for several weeks longer. A weight should be attached to the splint and hung over the end of the bed.

Knee-cap. *Signs.*—There is inability to stand, and the fragments can be felt with a gap between them.

Treatment.—Put a splint under the limb, reaching

from the upper part of the thigh to below the calf, or better, to below the heel with a foot-piece attached for the sole to rest upon. (N.B.—See that the heel is not pressed upon.) Bandage the leg firmly. Now raise the limb with a support under the leg, and force down the upper fragment towards the lower, and retain it in its place by a bandage wound round the limb above the upper fragment. Long strips of plaster are better than bandage. A stiff knee-cap will have to be worn afterwards. Must not move leg for several months.

Hæmorrhage (Bleeding).—Moderate bleeding usually ceases upon application of cold or pressure, or raising the limb. The best styptics are very hot water (as hot as the hand can possibly bear); very hot water mixed with alcohol of any sort; turpentine, the latter especially, when applied on lint and pressed into the wound, it is also a capital antiseptic. Alum, powdered galls, or steel drops may be used. If any troublesome blood-vessel can be seen (if the bleeding is bad, it should be searched for) it should be seized by pincers or forceps, and twisted round several times, or caught with a sharp hook or sharp piece of wire, and tied round with strong thread or ligature, which should be allowed to hang out of the wound. It must be insisted upon that every article used to a wound is to be surgically clean, and ought to be soaked in boiling water or passed through a flame. Lister's cyanide-

gauze (see introduction) is the best application. (*All instruments should be very clean;* see WOUNDS p. 129.) If unable to stop the bleeding, plug the wound with turpentine and lint, etc., and bandage firmly, elevate the part, and soak the part next day in cold carbolic lotion, allowing the plug to gradually loosen.

In severe cases, the main artery can be felt for and pressed upon by finger and thumb, or a tourniquet can be used by tying a strong band above round the limb and twisting it tight my means of a stick or any handy article; if the artery can be found, it is as well to place a stone or cork between it and the tourniquet.

Sprains.—Secure complete rest by bandage or splint; elevate, apply cold, and if this does not relieve pain, use very hot water. If there is doubt as to a fracture, treat as a fracture (p. 123). When the inflammation has subsided, rub gently with liniment, and strengthen by plunging joint into very hot water and then into very cold water. Sea water is the best. It is a great mistake to keep the joint immovable for more than a few days, for adhesions form inside the joint and cause stiffness afterwards, therefore, *directly the inflammation has subsided*, begin to move the joint and apply massage and douches and, if the ankle, walk upon it soon. The art of the "bone-setter" lies in breaking down the adhesions in a stiff joint; they break with a

crack, and the humbug explains that this is "the small bone going into place," and generally the patient is cured, but in some cases severe inflammation is set up, and the joint is ruined.

Wounds.—General directions for treatment.

1. *Arrest bleeding.* (See HÆMORRHAGE, p. 127.)

2. *Perfect cleanliness.* Hands, instruments, sponges, etc., must be washed and soaked in carbolic lotion (p. 138), or corrosive sublimate (p. 143), and the wound exposed to the air as little as possible. Use water that has been boiled recently or else filtered. Remove all dirt and splinters, etc.

3. If the wound is clean cut, *bring the outer edges together* by plaster or stitches, if the latter, use clean white silk, horse-hair, or soft silver wire threaded on a surgical needle, and soak them in boiling water and antiseptic lotion before use.

4. *Apply dressing with a bandage over it.*

Dry dressing.—Powder the part with boric acid or iodoform, and apply clean lint or wool or rags.

Moist dressing.—Use iodoform or boric acid as with dry, and apply lint, etc., wrung out in carbolic or corrosive lotion, and cover with oil silk, a plantain-leaf, tissue paper soaked in carbolic oil, or tin-foil, to prevent evaporation. If the wound is dirty, better apply wet antiseptic dressings.

5. *Support the injured part with slings, etc.*, and make the patient as comfortable as possible.

6. If the wound is very dirty or foul and inflamed,

wash it thoroughly in strong carbolic lotion, and even pure carbolic acid may be applied without danger provided it do not run over the skin.

After-treatment.—The more rest the injured part has the sooner will it heal. If the dry dressings have stuck, soak them in carbolic oil, and leave them, unless there is inflammation. Moist dressings require to be kept moist, and should be changed every day or oftener if there is much discharge, and the part bathed in antiseptic lotion and dusted with iodoform or boric acid, if these are at hand. If inflamed and throbbing, syringe the wound out with antiseptics, and see that no discharge is pent up. If the wound is foul, and no antiseptics are at hand, it must be freely washed in boiled water, and sprinkled with finely powdered sulphur, which can generally be procured, this will when acted upon by the flesh, be strongly germicidal, and make the wound clean.

Wound of Chest.—Keep absolutely quiet on the injured side. Bind round the chest with a bandage after treating the wound (p. 129). Low diet. No alcohol. Chlorodyne, if there is much pain. If there is difficulty in breathing, sit the patient up.

After a severe crush if great difficulty of breathing occurs, bleeding from the wound may save life.

Wound of Belly.—Usually there is collapse and a fatal result, unless surgical aid can be quickly procured. Lay quite still on injured side, with the

legs drawn up. Give Dover's Powder, 10 grains, or opium half a grain, or chlorodyne 10 drops, every four or six hours until drowsy, if there is much pain. Treat the wound with antiseptics and dressings, and do not close the edges.

CHAPTER VI.

DESCRIPTION AND USE OF THE MORE COMMON REMEDIES AND APPLIANCES, ARRANGED IN ALPHABETICAL ORDER.

CHAPTER VI.

DESCRIPTION AND USE OF MEDICINES.

Alum (Hind. *Phitkari*).—A pinch of the powder added to dirty water causes impurities to fall to the bottom. Dissolved in water, it stops bleeding when applied to wounds. Used as gargle in sore throats, and as a lotion for sore eyes and nipples.

Ammonium Carbonate.—Three-grain dose, or one tabloid, dissolved in water, as "SAL VOLATILE" (Aromatic Spirits of Ammonia), 30 drops in water. An effective stimulant. Useful in fainting, and also in prostration. For wind, dyspepsia, or colic.

Ammonium Chloride (*Sal Ammoniac*).—Is given for congested liver, and for chronic cough where there is much phlegm. Dose, 10 to 15 grains in water several times a day.

Antimony Tartrate (*Tartarated Antimony*).—Dose in tabloid form ($\frac{1}{50}$ grain), one or two every four hours. Often used as "ANTIMONIAL WINE." Dose: 5 to 15 drops in water. Small doses, often repeated, cause sweating and loosen phlegm on the chest. It is given in fever and inflammation of the lungs,

where breathing is difficult, cough is "tight" and painful, and the skin is dry. Is depressing, and should be discontinued when the phlegm becomes loose and easily coughed up.

Antipyrin.—In 5-grain dose to relieve headache. Must not be continually nor habitually used, as it depresses the system, and may cause heart failure. Reduces fever; if the temperature of the body is high, the skin dry, and the strength good, it may be given in 5-grain doses every 3 or 4 hours till sweating commences. Is useful in ague and in sunstroke.

Bœl Fruit (*Oegle Marmalos, Stone Apple.* Hind. *Bœl geerie*).—Is an astringent to the bowels, and also a slight aperient. Used in dysentery and chronic diarrhœa, and the irregularity of bowels so common with children.

To make Decoction.—Boil 3 ounces of the dried fruit (or 1½ ounce of half-ripe fruit) in a pint of water, until it evaporates to half a pint. Dose for adult: a wine-glassful, several times a day.

To make Syrup.—Add a wineglassful of water, and a tea-spoonful of sugar to the juicy part of the fruit. May be taken several times daily.

Boric Acid (*Boracic Acid*).—Is a fine, smooth powder. A mild antiseptic. Can be freely dusted upon all wounds to soak up discharge. For sore feet, and also for stinking feet, after washing dust well

with boric acid. For eye lotion, about 40 grains (half a tea-spoonful) to half-pint of boiled water, may be used to the eyes with impunity. Given in 5-grain doses, dissolved in water, for inflammation of the bladder. Makes an excellent mouth-wash.

Carbolic Acid.—Sold in crystals or in liquid of various degrees of purity. (Jeyes' fluid is a crude carbolic acid, but is most efficient as a disinfectant for drains, etc.) Best carried in crystals in thick 2-ounce bottles or, for household purposes, in larger bottles. In hot climates it is generally liquid; but, if not, it can be easily dissolved by warming the bottle.

It is the most universally useful and potent disinfectant known, and the result of its use in all inflamed or dirty wounds, or in abscesses, will be apparent to the most careless observer.

Taken internally, is a painful *poison*. *Antidotes.*—A quantity of glycerine and an emetic or stomach pump; oils, eggs, Epsom salts.

The use of different strengths—

"*Pure.*"—May be used to *very foul dirty wounds*, where there is much inflammation. Take a piece of wool or lint, moistened with the acid, in a pair of forceps, and dab it well into the wound, which should be well washed in "1 in 60" afterwards. If it touches the skin it will cause a painful burn, so do not let it run down the sides over the skin.

"1 *in* 20."—Made by dissolving 1 part by measure in 20 parts of warm water, *i.e.* 1 ounce in 1 pint, or half an ounce to a tumblerful, or 1 teaspoonful to about a wine-glassful and a half.

Used for washing out poisoned wounds, or wounds that have been caused by dirty articles, and subsequent application on lint wrung out in it. All instruments should be soaked in this, after cleaning them, before use. Is too strong for ordinary use.

"1 *in* 60."—Made by dissolving 1 part of acid in 60 parts of water (1 ounce to 3 pints of water, or 1 dram to half a pint of water).

Is the most generally useful strength. Should be used to all inflamed surfaces (except the eye, when boric acid should be used, see p. 136), and to ordinary wounds, cuts, scratches, etc. Boils and carbuncles should be kept covered with lint or rag soaked in it, and if covered with mackintosh constitutes an "antiseptic poultice" (see p. 146).

Made with *boiling* water and linseed meal added, it makes an excellent application for a whitlow, bubœ, or other abscess.

Carbolic Oil.—Made by dissolving 1 part of carbolic acid in 10 parts of clean olive oil. Must be kept stoppered, and when used a little is to be poured into a small clean vessel and the lint soaked in it. Is perhaps the most generally convenient and efficacious application in general use for applying to healing wounds, also to boils and

abscesses, and to spread over the skin before applying a poultice. Stops itching around the back passage ("pruritus").

Diluted with equal parts of olive, or better, castor oil, is used for lubricating catheters before use. ("weak carbolic oil").

Castor Oil (Hind. *Rindee Ka Tail, Arcendi Ka Tel*).—Often to be had in the bazaars. See that it is fresh, and not rancid. Purgative: half an ounce to 1 ounce for adults, and half a dram to 2 drams for children. Is a safe medicine for delicate people, especially in pregnancy. The taste may be disguised by lemon-juice, peppermint-water, etc. For colic is excellent with addition of a few drops of chlorodyne.

Catheter.—Should be made of soft gum elastic or indiarubber. Nos. 7 to 10 are the most useful sizes. Must be carefully washed before and after use (and a good stream of water passed through it), and also rinsed in carbolic or sublimate lotion (p. 143). Weak carbolic oil should be smeared upon the end before using.

To use.—Well cleanse the end of the privates with carbolic lotion, and then pass gently and slowly into the passage until the urine flows, and when the full stream has ceased withdraw it. Keep the hand pressed upon the lower part of the belly until the instrument is removed.

A wire is often provided inside to keep the catheter from bending. This should be taken out before using, and be cleaned before putting it back after use.

Chiretta (*Kreat*).—Useful tonic. Boil half an ounce of the cut dried herb in water for half an hour. Dose: a wine-glassful twice daily before food.

Chloral. — Used to produce sleep. If taken habitually it ruins the constitution. (No sleeping draughts should ever be taken for long, for they lose their efficacy.) Useful for bad neuralgia, delirium tremens, convulsions, nervous irritability, etc. It is better to try the effects of bromide of potassium first and, if that does not produce sleep, add 5 to 10 to 20 grains of chloral dissolved in water. (The dose of "syrup of chloral" sold by chemists is one tea-spoonful, corresponding to 10 grains.) Sulphonal (see p. 148) is a better and safer drug.

Chlorodyne.—Best given in liquid form dissolved in water. Dose: 5 to 30 drops. Contains opium, chloroform, and spices. Used to relieve pain and to check diarrhœa, especially when cholera is about. The bottle should be well shaken before use.

Chloroform.—Is useful to have handy, for in case of accident the doctor may not have it with him. Is used to produce insensibility by inhaling it, but requires very skilful handling, as it depresses the heart, therefore should never be administered except

by a medical man. CHLOROFORM WATER is made by adding one tea-spoonful of chloroform to a pint and half of cold water, and dissolving it by shaking; it has a sweet warm taste, and is very useful in colic and dyspepsia. Dose: a wine-glassful.

Cocaine.—Used for producing insensibility to pain in the eye, in wounds, and in toothache. For irritation of the eye from dust, etc., dissolve a tabloid in a few drops of water and pour them between the lids. For toothache, crush the tabloid and put the powder in the hollow of the tooth and on the gum outside.

Colocynth, Hyoscyamus, and Hydrarg. Pills.—Can be obtained in "tabloid" form. Gently purgative. Apparently suit most people. Very useful in bilious attacks.

Dover's Powder (*Ipecacuanha and Opium*).—Most useful for alleviating pain, and to add to quinine for ague. Also to prevent vomiting in dysentery, when ipecacuanha powder is given. Dose, 5 to 10 grains.

Enema (or Clyster).—The best enema syringe is that known as "Higginson's indiarubber tube syringe;" with this, by working the ball, a continuous stream can be produced.

To use.—Fill the syringe with fluid, leaving the end under the surface. Oil the nozzle and gently insert it well into the back passage, and retain it there by fingers. Slowly pump in the fluid.

Composition: 1. *For clearing out the rectum.* (*a*) A pint of plain warm water, or with addition of soapsuds, or mixed with ½ to 1 ounce of castor oil or turpentine; (*b*) GLYCERINE, one or two drams injected with a *small syringe*, or else in form of "suppositories" made of glycerine jelly, or *impromptu* of cotton wool (soaked in glycerine), about size of a filbert, inserted into the rectum as far as finger can push. Acts within a few minutes.

2. *For cleaning the lining of the gut.*—As for chronic dysentery—sulphate of copper, 30 grains to half a pint of water, or a drachm of boric acid or chlorate of potash to the half-pint.

3. *For stopping diarrhœa.*—A wine-glassful of thick starch water with 30 drops of chlorodyne or tincture of opium.

Galls and Opium, Ointment of.—A brown ointment which does not keep very well. Is a very efficacious remedy for piles when applied constantly night and morning.

Ginger.—The tabloid form in 5-grain doses corresponds to 5 drops of the strong tincture. Dose: 5 to 20 drops in water for colic or griping pains in bowels, or with soda mint for indigestion.

Hydrarg. Perchloride ("*Sublimate Soloids*").—Are an absolute necessity unless carbolic acid is carried. One soloid dissolved in a pint of water kills nearly all germs, and can be used as a disinfectant.

"Sublimate soloids" must be kept safe, for if swallowed by mistake for sweets, *poisoning* will happen. *Antidotes.*—Emetics, raw eggs, milk; opium to relieve pain, and brandy and water injected into rectum. For a lotion for wounds, abscesses, boils, carbuncles, etc., one soloid dissolved in a pint and a half or two pints of clean or boiled water.

Ipecacuanha.—Generally used as "Ipecacuanha Wine:" dose 5 to 15 drops, to loosen "tightness of the chest" in lung affections. For children this is better than the powder; children take nearly as large a dose as adults. To produce vomiting give a tea-spoonful in half a wine-glassful of warm water, and repeat the dose every quarter of an hour till vomiting occurs. *Ipecacuanha powder* (tabloids of $\frac{1}{10}$ grain correspond to about 2 drops of the wine). In large doses of 30 grains the powder is used for dysentery.

Iron.—The principal use is to increase the colouring matter of the blood. Is most useful for pallor (anæmia), and is usually needed for debility in combination with quinine. Blaud's pill in tabloid is the most useful form. *Sulphate of Iron* (*Copperas* or *Green Vitriol; Hera Kasees*) in doses from 2 to 5 grains dissolved in water, is a powerful tonic. The bowels must be kept freely open, as iron tends to constipate. "Tincture of steel," or "solution of steel" (liquor ferri perchloridi), is a strong sherry-coloured fluid and a powerful tonic, and applied

to bleeding surfaces quickly arrests hæmorrhage. Dose: 10 drops dissolved in wine-glassful of water.

Lead Lotion (*Goulard Water. Solution of Acetate of Lead. Liquor Plumbi*). — Two drams of the pharmacopœal "Liquor" mixed with half a pint of water. Useful application to inflamed or irritable skin, as in prickly heat, sunburn, or snow-glare. It is also a good antiseptic. Made with hot water is a useful application to bruises (especially on the shin-bone) and sprains.

Lime Water.—One ounce of quicklime mixed with 1 quart of cold water (boiled), cover, and after three hours the clear liquid may be poured off for use. Keep in stoppered bottle. Deteriorates with time. Dose: ½ to 3 ounces several times daily with milk. Helps to break up the clot of milk in the stomach. Useful in indigestion, dysentery, sprue, etc.

Nitric Acid.—A strong corrosive acid. Diluted with 10 parts of water is known as **Dilute Nitric Acid**. Dose: 5 to 10 drops in water, with kreat, or nux vomica, or quinine. Is especially useful in chronic debility of the digestive apparatus, and after dyspepsia and bilious attacks. The stomach in health contains acid which destroys germs.

Paregoric (*Compound Tincture of Camphor*).— Contains a small quantity of opium. Dose: 15 to 60 drops. A single dose of 60 drops in hot grog

at night will often stave off a severe cold. Used for coughs and colds where the hacking is distressing, and also where the expectoration is profuse and thin.

Pomegranate (Hind. *Anar*).—The rind of the fruit or the bark of the root is used for tapeworm, dysentery, diarrhœa, or astringent for sore throat. Is very useful for natives. To make decoction: 2 ounces of the rind or bark; water, 2 pints; boil down to a pint and strain. For bowel complaints, a wineglassful several times a day. For tapeworm, a pint taken during the day upon an empty stomach, and strong purge afterwards.

Potassium * Bicarbonate.—Used in the same way as sodium bicarbonate, but is more powerful.

Potassium Bromide.—Dose: 10 grains every four hours, or 30 grains at one dose, dissolved in water. Is a most valuable drug for reducing nervous excitability. In nearly all cases of brain irritation, nervousness, restlessness, insomnia, and anxiety, and often in neuralgia, great relief is secured. For insomnia, to produce sleep it should always be tried before using chloral. Is very efficacious in epilepsy. Must not be continued for more than a few days, or depression may ensue.

Potassium Nitrate (*Saltpetre*, Hind. *Shora*).—Dose: 5 to 10 grains dissolved in water. Stimu-

* "Potash."

lates the skin and kidneys, and so cools the body. Useful in fever, inflammations, and rheumatism.

Potassium Permanganate.—Two grains added to half a pint of water will make a light claret-coloured solution. Used to purify water, and as a disinfectant to remove offensive smells. As a mouth wash for offensive breath. Also in tabloids.

Poultices.—*Plain Poultice.*—Never to be applied to a wound or inflamed surface or abscess; mostly used for lung and belly complaints. Linseed meal is the best material; but oatmeal, starch, bread, bran, or charcoal etc., may be used. Use boiling water; heat the basin by pouring hot water into it; put the meal into the basin, gradually pour in the boiling water and beat into a thick paste; spread the hot paste on linen. The paste should be about half an inch thick all over, and a margin of about one and a half inch should be left all round to turn up the linen over the edge of the poultice. If it has to be carried some distance, have it put between two hot plates.

Antiseptic Poultice.—To the boiling water add carbolic acid in the proportion of 2 drams (2 teaspoonfuls) to the half-pint (see p. 138); the process for making the "plain poultice" can then be gone through.

A milder, better, and cleaner antiseptic poultice is made by applying lint soaked in hot carbolic lotion "1 in 60" (see p. 138), and covering with

mackintosh, gutta-percha, or wool, or a large leaf, to prevent evaporation and to keep in the heat.

Mustard Poultice.—Made by making a paste with mustard and water and spreading upon linen; mustard leaves are better. Mustard may be added to plain poultices in various proportions. Children stand mustard better than adults.

QUININE.

Dose: 1 to 30 grains. Used in the form of "sulphate of quinine." It is insoluble in cold water, slightly soluble in alcohol or wine, but very soluble if acid be added in the form of a few grains of citric or tartaric acid, or a few drops of dilute sulphuric, hydrochloric, or nitric acid. Like all other drugs, it acts most quickly on an empty stomach, when less is required to produce the same effect than a similar dose on a full stomach.

It may be taken as a "powder"—mixed with food or rolled in a cigarette paper or cachet, and washed down with water, and so any objectionable taste avoided. The powder may be mixed in water or milk, and, as it is not dissolved, it will be scarcely tasted. When "dissolved" in acid or alcohol, it is extremely bitter, and so has more effect as an appetizer.

Ammoniated Tincture of Quinine is a most useful remedy for ordinary "cold in the head,"

especially when menthol snuff is used at the same time. It is best taken in teaspoonful doses in a small glass of wine (if mixed with water it precipitates) several times a day.

Quinine Wine usually contains but a very small quantity of quinine, but is a useful bitter appetizer.

Uses.—In small doses 1 or 2 grains taken two or three times a day, it acts as a general tonic, wards off malaria, and is especially useful during convalescence from severe illness. Two grains should be regularly taken every morning during residence in malarial districts, and from 10 to 30 grains should be taken during the hot stage of ague. (See Malaria, p. 33.)

In typhoid, rheumatism, or other acute fevers, if the fever becomes raised above 105°, large doses of quinine should be given.

For sore throat, the acid solution, mixed with chlorate of potash dissolved in water as much as the latter will take up, is a most efficient gargle. (About 4 grains of quinine to a wineglassful of solution.)

For neuralgia, especially that form so often due to ague, it is almost a specific, especially when antifebrin 5 grains, or antipyrin or phenacetin, is taken at the same time.

Soda Mint Tabloids.—Valuable in heart-burn and indigestion. One to three for a dose.

Sulphonal.—Is the best and safest sleep-producer.

It is nearly insoluble in water, if taken in tabloid form they should always be finely crushed. The action is slow, sleep often following on the second night. The best way to take it is to stir the powder in very hot water or milk. Being tasteless, the fine powder can be taken with the food. Dose : 10 to 30 grains.

Sulphur (Hind. *Gandhak*).—Used for disinfection by burning it in the closed-up room. The fine powder (precipitated sulphur) made into a paste with water is a useful application to ulcerated throats, and also for foul wounds.

Suppositories.—Are small cones about the size of the end of a little finger, made for insertion by the finger into the back passage. Are used—for *producing a motion*, and are then made of glycerine jelly, or home-made out of a piece of soap, or of wool soaked in glycerine ; or for *easing pain*, then containing opium or morphia, or for *stopping diarrhœa*, when they contain opium, or morphia, or lead, or tannin and various astringent substances. When used, they should be passed into the gut by the finger for a full inch and a half from the entrance, or they may not be retained.

Thermometers.—Should be small, self-registering, and guaranteed to record the temperature in two minutes or under. The graduations should be plainly marked, and are more easily read if there

is a "magnifying index." The temperature is usually taken in one of two situations—in the mouth or in the bared ampit. The best plan, in order to become efficient, is to take a few lessons from the doctor or some one who understands the method. Be careful before placing the instrument in position, to thoroughly shake down the index below the "normal" mark at 98·6°. The armpit should be wiped dry, and the arm held close to the side and not exposed to draughts.

It should always be washed with *cold* carbolic lotion after use, or disease may be conveyed upon it (hot water will crack the bulb). A slight rise of temperature is common and of little import, especially in children, but a considerably rise, 101° or 103° or more, continuing over 12 hours, generally indicates serious disease.

Warburg's Tincture.—Contains quinine, aloes, opium, rhubarb, camphor, and several spices. Made into tabloid form for convenience. Is used for obstinate malarial fever (see p. 32).

The bowels to be gently opened by some mild aperient, and then the drug administered in dram doses every 3 or 4 hours, but not giving more than 3 or 4 doses in the 24 hours.

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Worms	111
Wounds	129
—— of chest	130
—— of belly	130

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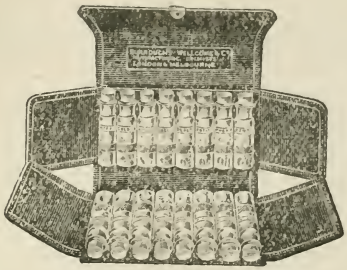

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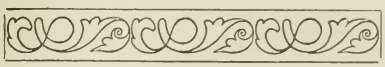

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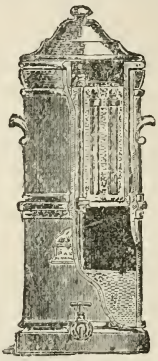

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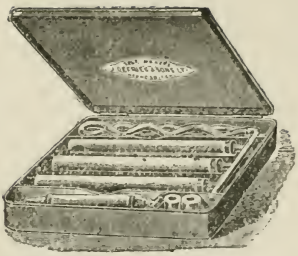

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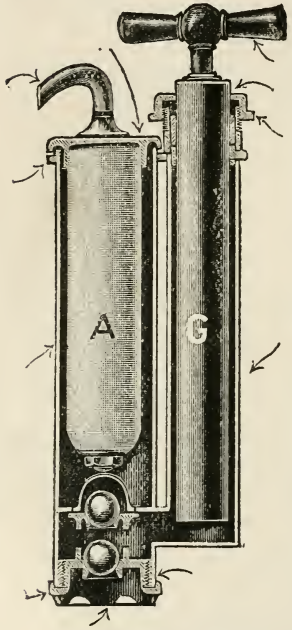

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